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Nº 4
STUDY

MARKETING — ITS ROLE IN INCREASING PRODUCTIVITY

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS • ROME • ITALY

FREEDOM FROM HUNGER CAMPAIGN

Basic Studies Series

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MARKETING — ITS ROLE IN INCREASING PRODUCTIVITY

With the Compliments of the
FAO INTERNATIONAL FOOD TECHNOLOGY TRAINING CENTRE
AT THE
CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE
MYSORE CITY
INDIA

MARKETING — ITS ROLE IN INCREASING PRODUCTIVITY

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FOREWORD

The first half of the twentieth century has witnessed three major revolutions. The political revolution has given self-government to nearly a third of the world's population and has brought their aspirations for a better life to the forefront of world attention. The revolution in communications has broken down the barriers of distance and language, and the dynamism of ideas can no longer be contained within the limits dictated by social privilege or political considerations. The demographic revolution has imparted to the challenge of poverty and want a new dimension.

It is against this background that the Freedom from Hunger Compaign was launched in 1960 by the Food and Agriculture Organization of the United Nations. Its main objectives are twofold: first, to create a worldwide awareness of the problems of hunger and malnutrition which afflict more than a half of the world's population and which, apart from the human suffering and human degradation that they involve, pose a serious threat to peace and orderly progress, and second, to promote a climate of opinion in which solutions to these problems can be organized both on a national and on an international basis.

In the short time since its launching, the Campaign has already provided a focus for co-operative endeavor for international organizations, national governments, nongovernmental organizations and various citizens' groups all over the world. The 104 Member Nations attending the biennial session of the FAO Conference in November 1961 paid unanimous tribute to the significance of this Campaign for the future well-being of the world.

The Freedom from Hunger Compaign attempts to attack the problem of hunger on a broad front and at all levels of economic and social thought and action; but for practical purposes, it defines three sectors of operation: (a) *information and education,* (b) *research, and* (c) *action.*

The information and education sector will help bring to citizens everywhere a living awareness of the concrete facts and issues, and provide bases for deciding what new national and international policies and action programs are needed. This effort to create informed and active awareness will rise to a climax with the World Food Congress to be held under FAO auspices in 1963. Many international professional and citizens' groups will hold forums on Campaign issues in 1962 and 1963. Many national Campaign Committees will also organize similar discussions. Representatives from all these bodies are expected to participate in the World Food Congress and help bring into focus policies and action plans for the future.

The series of **Basic Studies** *has been prepared by FAO and other co-operating international organizations to aid citizens in discussing the great issues involved.*

These documents attempt to summarize the known facts and agreed conclusions of experts in each special field, and thus provide useful and reliable background material for study groups and public discussions.

The volumes in this series cover broad subjects such as the adequacy of food levels in the world, the possibilities of producing more food, and the ways in which economic development and training in the newly developing countries can raise buying power and thus help hungry people to buy more food for themselves. They bring out the central importance of good nutrition for health and working efficiency, and study how people can learn to choose their foods better. They appraise the efforts being made in individual countries to raise food output, to increase jobs and incomes, and to train and educate people in ways to increase production and in better dietary habits. The volumes cover the relation of food production to climate and weather, the better distribution and marketing of food, and the use of available surpluses to relieve hunger and provide an incentive to economic and social development in the developing countries.

I trust that these **Basic Studies** *will stimulate thought and action on the critical problem of hunger and contribute to an ever-expanding understanding of the related social, economic and technical issues.*

B. R. SEN
Director-General

INTRODUCTION

The marketing of agricultural products is vitally important in any campaign to free the world from hunger for two main reasons. Most of those who go hungry do so because the food they need costs more than they can afford. Since a large part of the price is often made up of marketing costs, it is clear that high marketing costs are an important reason why some people have not enough food. The more these costs can be reduced, therefore, the easier will it be for poor consumers to get the food they want. This aspect is all the more important in that the proportion of the population living away from farms and dependent on the marketing system for their food is increasing rapidly. This is true even in the low income areas of the world; it is in the large cities of Asia and in the shanty towns around African and Latin American capitals that some of the hungriest people live.

The second main reason for stressing the significance of marketing is its impact on production. If the producer cannot see an easily accessible market outlet where he can sell the food he produces beyond his own needs, then he has little incentive to produce it. This holds good at the lowest level of subsistence production, where some of the farmer's own family lack nutritious foods and he could buy meat or fish for them if he could sell his grain for a better price. It also holds good at intermediate levels where, though food is produced for the market, much more could be produced and the supply available thus increased to those who need it in the cities, were the prospect of attractive returns at the farm level clearer and more secure. The need to provide adequate incentives for increased production is all the more pressing when set against the rate at which the world population is increasing. Between 1958 and 1959 alone this increase was more than 26 million and, if this rate continues, there will be a total of about 4,220 million in 1980, representing 1,310 million extra mouths to feed.

Effective marketing is also critical for the success of development programs designed to uplift a population as a whole. In spite of the strides in industrialization being made in many less developed countries to break through the "circle of poverty," a large section of the population must continue to depend for their living on agriculture. Any plan of economic development that aims at diminishing the poverty of the agricultural population, reducing consumer food prices, earning more foreign exchange or eliminating economic waste, has, therefore, to pay special attention to the development of efficient marketing for food and agricultural products.

1. WHAT IS MARKETING

Since about 50 percent of the world population lives in urban areas, it is not enough that food production be adequate for their needs; this food must be brought to the places where they live and work, and must be available at prices they can afford. Otherwise many will remain hungry, yet in some places there will seem to be food in surplus. This in why marketing is a critical part of any campaign to relieve hunger. Marketing is the means by which food is brought from the place where it is produced to the people who want to eat it.

Marketing can be a very simple process; it can also be very complex. This depends on how far away the consumer is from the farm; it also depends on what must be done to the farmer's product to get it from the field to the consumer in good condition, in an acceptable form and to have it ready when the consumer wants it.

Marketing is relatively simple in a village community which produces most of what it needs. Here the producer can sell directly to consumers coming to his house, or he can attract them by displaying his produce in some central open space in the village which then becomes known as "the market." The total volume of food sold in this way is still very large, especially in the less commercially developed countries. Direct marketing of milk, and fruit and vegetables, which are easily consumed in the same form in which they are produced, is still common in Europe and North America. Indeed, direct marketing is sometimes praised because of its low cost, and because it does not involve any "middlemen" between producer and consumer.

However, those who extol this view are shutting their eyes to the limitations it imposes on the community's level of living. If farmers can sell only to the local consumers, then even if their land could produce more than they need, or was especially suited to some crops and not others, there is no way by which they can take advantage of these

potentialities. Similarly, the consumers are only able to eat what is produced locally, which may confine them to a diet that is monotonous, unsatisfying and in terms of human effort, very expensive. This is true of many African groups living mainly on cassava, which requires much home processing and still has little nutritional value; and of the many others in Latin America and Asia for whom most meals consist of hand-pounded cereals.

These undernourished people will not be able to draw upon the resources of areas which can produce some items more cheaply than is possible locally. Depending upon local climatic conditions, they may have to live through two thirds of the year without fruit, green vegetables or the protein foods necessary for adequate nutrition.

Frequently it is precisely this dependence on purely local outlets and supplies that keeps an area on a low income, poor health, survival subsistence basis.

Generally, an advance in the level of living is associated with increasing specialization in production, and for this to bring a reward there must be a comparable development in marketing. When the gap between producer and consumer becomes too wide and when the consumer demands services which the producer cannot furnish, specialized marketing enterprises find scope for profitable operation. In order to work economically they take up specific premises, construct storage facilities and acquire transport and handling equipment or services.

In the case of some agricultural products, specialized handling between producer and consumer is almost essential because of their particular character. Most farm products are perishable and cannot be too long on the way to the final consumer without suffering loss and deterioration in quality. Peaches, grapes, tomatoes and many other fruits and vegetables rapidly become overripe and decay if they are not soon consumed or kept in special storage. Milk and meat keep fresh for only a short time in hot climates. Another problem in many production areas is that most farm crops come to maturity during a relatively short period of the year. Sales of meat animals are also concentrated into peak periods as a result of seasonal shortages of foodstuffs, summer droughts and the onset of winter.

Opposed to this periodicity in supply is the generally stable character of the demand for farm products for use as food or industrial raw materials – at least over the short term. Relatively constant amounts

of the basic foods are needed for regular consumption throughout the year. Most housewives do not expect to purchase more than one week's supply of food on a single occasion and in many countries they buy every day.

The market system must, therefore, be able to cope both with the seasonal outflow of produce from the farm and the relatively stable and continuous consumer demand. This is done by a rapid mobilization of transport and storage facilities, skilled handling, the provision of adequate credit, and willingness on the part of traders to accept risks and responsibilities.

The consumers willing to pay the most for the agricultural output of some areas may be situated several thousands of miles away, in a different climatic zone, for example. To supply them, produce may be shipped halfway around the globe, stored carefully in silos (in the case of grain), under refrigeration (meat, eggs and many other perishables), or in controlled ripening chambers (bananas). They may undergo skilled processing to permit easy transport, meet special tastes, or save the consumer trouble in preparation. Thus wheat, harvested in Argentina in January, now flows smoothly into the shopping basket of the housewife in Amsterdam the following December as vitaminized, prepacked sliced bread. Milk produced on a dairy farm in New Zealand is offered to consumers in Accra as high quality butter. The product offered to the consumer may even reflect a combination of foods originating in several different countries. Thus, a meat packer in Europe may use meat from pigs fattened in Poland, and from heifers slaughtered several months previously in Rhodesia, together with spices from India, in preparing sausages which will be exported in cans to South America. At that stage, of course, it is really a manufactured rather than agricultural product that is being marketed, but the initiative in preparing this product is helping to raise farmers' incomes in some parts of the world and helping consumers to live better in others. Its success involved a marketing decision.

What then is marketing? It is what specialized wholesalers and retailers do with their products that makes consumers prefer to buy from them rather than directly from farmers, and induces the farmer to sell through them rather than in small lots to his immediate neighbors. Marketing is the combination of activities by which agricultural produce and raw materials are made ready for, or capable of,

consumption and reach the final consumer in a suitable form at the time and in the place he wants them. Thus it includes assembly, transport, sorting, cleaning, grading, storage, packing, initial processing, looking for suppliers, looking for outlets, financing the holding of produce between the time that the producer is paid and when it is bought by the consumer, taking the risk of holding produce until an outlet is found, adapting it to consumers' tastes, informing them of its availability and quality, presenting it in convenient-sized lots and all the other operations involved in bringing goods from the producer to the final consumer.

Marketing and the producer

Farmers in advanced economies count on the availability of a good marketing system. Without it they could not make a living. Their production is highly commercialized and specialized, with 80 to 90 percent or more of their output directed toward the market – much the same as in industry. Their agriculture depends on a marketing system which includes roads, railroads and ships, wholesalers, commission agents and retailers, because all direct contact with the vast majority of the nonagricultural population has gone. Nor is it regretted.

The marketing system not only means life to modern farmers, it also means a better life than when no marketing system existed to take care of the sale of their produce. Marketing made possible the specialization of production and use of improved techniques of cultivation and harvesting, and of livestock raising, which resulted in higher yields per acre and per man. These bring higher returns to the operator with less drudgery and risk. But to acquire the means of cultivation – more productive seed, fertilizers and pesticides, etc. – farmers need cash which they can only obtain by sales. Without cash and, hence, without the means of marketing, this type of production would not be possible, nor the contribution it can make in freeing the agricultural population from poverty and distress and making their life more tolerable.

What does marketing mean to the small farmers in the less developed countries? It is one of the most important prerequisites for a breakthrough to a new way of life with a higher standard of living which, eventually, would be on a par with that prevailing elsewhere.

As has already been pointed out, a marketing link with a substantial body of landless consumers is indispensable for transition from subsistence farming to production for sale. Farming purely for subsistence with practically no produce available for sale is limited to a relatively few areas isolated geographically or historically, e.g., in Laos and Nepal and the Andean and Amazon regions of South America. However, still very common in Asia, Africa and Latin America is the small holding worked primarily to feed the farmer's family, but producing a small seasonal surplus which is sold at a village market to pay taxes, meet social obligations or to obtain a few things which the farmer cannot produce himself. This semisubsistence represents a step forward from pure subsistence, but it is never likely to raise an agricultural economy to a level where it can save and develop cumulatively. Since the markets within reach of the farmer's own means of transport can absorb only small surpluses, he has little or no incentive to expand production beyond the level already attained (Figure 1). There must be assurance that, after the harvest, buyers will come who will pay remunerative prices for the farmers' produce in order to ship them, perhaps, to distant consumer concentrations. When the farmer can be sure of this, then he has the necessary incentive to produce more.

Importance of market incentives

The incentive effect of being assured a remunerative outlet for extra output has been demonstrated many times over. The conversion to individual ownership of an area of land in central Africa, hitherto farmed on a traditional group basis, and the establishment of a favorable marketing system resulted in a doubling of total agricultural output in the first year, without any special input of capital equipment or extension activity.

Still more advantageous to the farmer and the economy in which he lives is the opportunity to produce a specialized crop, which is in wide demand and for which local conditions are more favorable than in most other places. Such opportunities depend on the availability of marketing techniques and organization to take this product to the consumers who want it. The initiative of wholesale distributors, access to fast sea transport, and more recently to chemical ripening retarders,

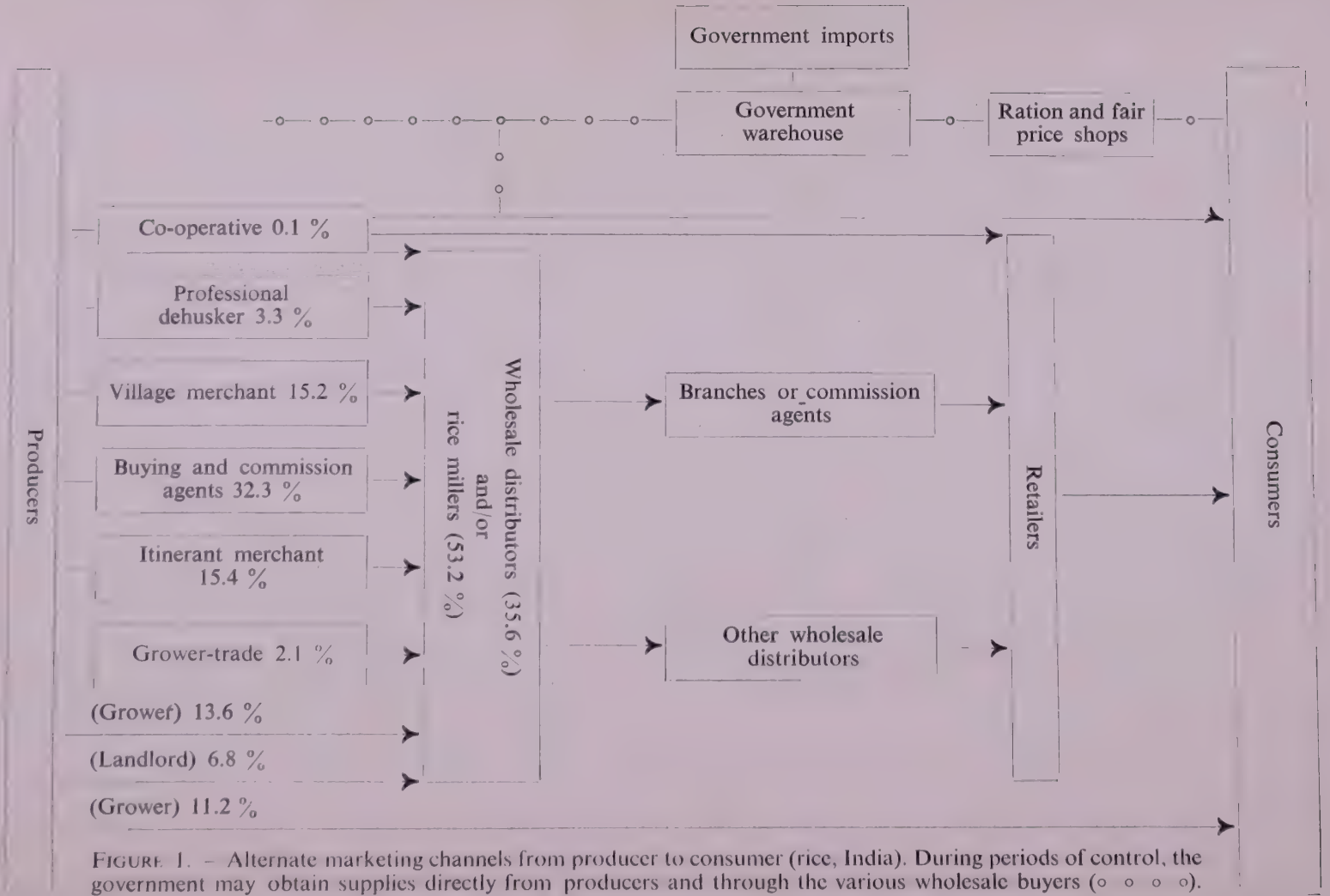

FIGURE 1. – Alternate marketing channels from producer to consumer (rice, India). During periods of control, the government may obtain supplies directly from producers and through the various wholesale buyers (o o o o).

has made possible the mass production of bananas in Central and South America and in Africa. The response of west African farmers to market incentives for the production of high quality cocoa and palm oil further illustrates their importance for development.

Announcement by a marketing board that palm oil of a certain grade would receive a price premium, for example, led to production of the proportion of that grade being raised from 50 to 60 percent of the total in the following year.

There may be some circumstances – obligations to share extra production with relatives, social pressure to maintain a traditional way of life, etc. – in which the incentive of a favorable sales opportunity is no longer effective. Here, the existence of an inward marketing channel has been shown to be a critical factor. In many parts of Africa, cattle traders have found that offering alternative consumer goods – cloth, watches, cooking utensils and household items – induced sales of surplus stock where money alone would not. Once their wants have been stimulated, higher money incomes would enable farm families with such attitudes not only to be healthier and better nourished, but also to undertake additional outlays to achieve further increases in production and income.

Often it is the lack of assurance that supplies of essential foods will be available that deters farmers from concentrating on profitable specialized production. Peasants growing maize on the outskirts of Belgrade were asked why they did not take advantage of their proximity to the city to keep dairy cattle and sell milk. Their reply was, how could they be sure of getting the grain they needed throughout the year for their families? This is also a marketing problem. For these products to be available for purchase, someone must undertake to buy and hold them ready, which necessarily involves the construction of storage and an outlay of working capital.

The farmers of a mountain province of the Philippines for a long time would not grow cash crops, such as cabbages and other vegetables for which their cold climate was suitable, despite the very high prices of such produce in the lowlands. Bad roads, which became impassable during the rainy season, would have made marketing extremely hazardous and might also cut them off from outside food supplies. The construction of all-weather roads and the provision of marketing facilities were the deciding factor in persuading these farmers to give

up growing subsistence crops and to go into specialized vegetable production.

Continuity of the market is also an important incentive factor. Attractive prices for a crop in one year do not constitute a sound basis for expanding its output if in the following year there will be great difficulty in selling it. Several such disappointments could result in a return to subsistence agriculture with its limited risks. Ramie, an excellent natural fiber for textiles, was only a potential export crop in Davao, Philippines, because of the " on again, off again " nature of the market, until the local producers' association and the manufacturing buyers in Japan met around a table and agreed to bind themselves to a continuing marketing contract. The responsibility assumed by the west African marketing boards for moderating year to year fluctuations in the prices obtained by producer–suppliers, in addition to assuring them an outlet, has also been very favorable in this respect.

Marketing and the consumer

If marketing means life to agricultural producers in modern economies, then with the growing concentration of the population in urban centers, where they have no food supplies of their own, marketing means survival to the consumers. Often 80 to 90 percent of city-dwellers have no agricultural resources and depend upon food being brought to them. If the marketing channels which do this were interrupted – as seemed likely for some countries during the last war – then many millions of people would be without food.

The regular supplying of food to urban consumers is, therefore, essential. It depends on a complicated but, nevertheless, continuously functioning marketing system, which tightly links the " isolated " consumers in the cities with agricultural resources, not only in the same country, but also in many others (Figure 2). This is true not only in the most economically advanced countries, but also in many parts of Asia, Africa and Latin America where the numbers of people living in cities are also increasing at a very rapid rate. The population of Leopoldville, for example, has risen from 40,000 in 1930 to 300,000 in 1955; and that of Karachi from 700,000 in 1945 to the present 2 million. Such a growth rate creates very difficult supply problems call-

ing for a parallel provision and adjustment of marketing facilities in countries whose human and material resources are often already overstretched. Behind a basket of potatoes in a city retailer's shop is a system that has brought it from a farmer who produced it perhaps hundreds of kilometers away. The potatoes have been bought, washed, sorted, graded, sacked, transported, assembled and distributed to the shop by the various specialists engaged in that work. If there are not enough potatoes available within the country, then some wholesalers would undertake the responsibility of importing supplies from elsewhere. The provision of other foods involves more elaborate procedures.

Quantity and quality sought by consumers

Rising incomes, which usually go with economic development, normally increase the demand for protective foods which add variety to the diet and many of which, e.g., meat, fish, milk, fruit and vegetables, are perishable commodities. Marketing structure and organization must, therefore, allow increased flows of agricultural products to markets and accommodate an increased proportion of perishables in those flows. The food must not only provide a suitable balance of nutrients for health, but it must also reach consumers in a wholesome and sanitary condition – no mean task when considered against the time, circumstances and distance required to collect and distribute it from necessarily distant sources. A liter of milk must be kept clean and cool, pasteurized or sterilized, it must undergo tests to ensure wholesomeness and must constantly be protected against adulteration until it finally reaches the consumer. During the course of this movement it requires careful handling and transport services calling for special facilities and skilled personnel. Similarly, it is in the interests of public health that meat be marketed through slaughtering plants, transport vehicles and retail shops that are subject to sanitary inspection.

It is not enough, however, that consumers have access to food of proven wholesomeness; it must also be food that they like. Consumers' tastes and food habits differ very widely. The type of rice produced by the two main exporting countries, Burma and Thailand, is not much liked by the Japanese, who are important rice importers, and they have looked elsewhere for their supplies. Wherever there

are Chinese residents there is a demand for the special ingredients of favored Chinese dishes – bamboo shoots, bean sprouts, sharks' fins. Similarly, there are many regional and local preferences for different types of fruit, vegetables and meat. In Rome, unripe greenish tomatoes are preferred for salad and those fully red go for cooking. Religious precepts affecting the consumption of meat and fats and traditional feasts and fasts also have a great impact on the pattern of demand in many parts of the world.

It is the task of the marketing system to ascertain those preferences and adapt to them, either by transporting certain foods to where they are most wanted, or by inducing farmers and processors to produce the preferred types locally if they have not done so previously. In the Swiss canton of Valais first quality Canada Reinette apples are produced. Years ago, production was low because of the special preference of the Swiss for highly-colored apples, whereas the Canada Reinettes are green. There is, however, a very good market for these apples in Paris in late winter or early spring, after the French apple crop has been consumed. To take advantage of this consumer demand, the Valais growers needed cold storage. When a private cold store was built at Charrat, and a regular wholesale contact established, almost the whole Canada Reinette crop was exported to Paris, thus providing consumers there with fruit they liked at a time when it was needed.

Production according to consumers' needs

The marketing system is also the medium by which consumer preferences are transmitted to producers as a guide to what they should grow. One of the chronic agricultural economic problems is the tendency of farmers to feel that what they grow should automatically find consumers, rather than exploring what consumers want most and then producing it. Often this would involve some additional outlay at the beginning and greater attention to quality considerations in handling and sorting. The means of indicating these preferences is by differentials in price, as between the desired and less desired types. A criticism of the marketing of copra in the Far East, for example, has been that the preferences of the consumer – in this case the overseas manufacturers –

have not been reflected back to the producer. As a result, they have continued to furnish a lower quality copra than the market desired and consequently have received poor returns for it. In addition to preferring produce classified carefully according to significant quality specifications, manufacturing and processor buyers generally want to buy a fairly large quant'ty of one consistent type. This is an important requirement in the marketing of such products; one which is not always met.

Consumers also differ greatly by income and the amount of money that they can afford to spend on food. They are likely to be best pleased when they can choose, according to their means, between foods offered at a wide array of prices, with a combination still providing a nutritionally adequate diet to those able to afford only low prices. This is especially important for the welfare of low-income populations in large cities, who must perforce buy all their food. It is because of the vulnerable position of large city populations and the political influence they can exert that governments often try to insure that basic foods, such as bread, are always available to them at prices they can afford, even when the improvement of internal marketing in general attracts little official attention.

The cost of marketing

" If only it did not cost so much, " says the consumer, looking at an attractive display of fruit on a retail counter. " If only we got a fair price for it, " says the grower. Both then blame the middleman for the wide margin between the price the farmer gets and the price that the consumer pays. The consumers forget that among them are many who work in the food trade and who are continually pressing for higher wages. The growers forget that in many countries there is a much higher percentage of bankruptcies among retail traders than among farmers.

Why, then, does the marketing cost, even of produce grown within the same country, frequently equal the cost of production and often exceed it? In other words, the farmer gets only half, or less than half, of the price the consumer has to pay for fresh or processed consumable food. Since the same products are eaten by the farmer and

his family, and to them it appears to cost almost nothing to bring them from the field or barn to the dinner table in a ready-to-eat form, why then, does it cost so much for nonagricultural consumers? How is it possible, they ask, that transport over a short distance to the cities, some minor sorting and processing operations and presentation to consumers in retail shops should cost the same as, or more than all the risky and expensive steps of production, including the use of costly farm machinery, fertilizer, milking machines, etc., not to mention all the arduous efforts and hazards involved in such production? Most consumers find it difficult to understand why this should be so. Yet, in fact, most of the apparently high margin between the consumer and producer price is actually cost, and only little of it profit.

Provision of marketing services

Marketing seems to cost nothing when the producer himself sells the produce on the farm to the consumer. Producer price and consumer price are virtually the same. If the farmer sells in a local market again there will be no marketing margin, but there will have been marketing costs; the farmer will have spent time transporting the produce to the market and selling it, for which anyone else doing it would have had to be paid. He also runs the risk of not selling all his produce that day at the price he wants, and of having to let it go for much less or bringing it back to the farm. He has employed time, and perhaps a horse and vehicle, which feasibly could have been spent in improving the output of his farm. If the time spent could not have been used effectively on his land, as might well be the case with very small farmers or those, like dairy farmers, whose main duties require attention only at certain hours, then marketing was a good use for it. Many other farmers, however, would be better off if they concentrated on production and left marketing operations to those who specialize in them and do them more efficiently by handling a larger volume at one time. Certainly, direct sales cannot supply all the food needed by the population of large cities, even in less developed countries, because of the distance to be travelled and the wastefulness of bringing in so many small lots separately. There is also the hidden cost to the consumer, who must accept the produce in the form in which the farmer offers it. Though

some housewives, for example, are prepared to buy poultry alive and kill, pluck and eviscerate the birds at home, many others, from Bangkok to Caracas, prefer to buy them ready-to-cook and are willing to pay more for this service.

Composition of marketing costs

The amount of the marketing margin normally reflects the extent of the services given, the cost of the labor, equipment, etc., used, and the degree of risk involved. The type of processing needed, the duration of storage involved, the bulk and perishability of a product and the ease with which it may be resold, all influence the size of the margin. Thus, as can be seen from the following figures, the marketing margin on bread is relatively much greater than on rice, because the wheat is ground into flour and baked into bread, whereas the rice is only husked and polished. In the former case (U.S.A., 1956) the farmer's share of the consumer price is 18 percent; and in the latter (Indonesia, 1956), 60 percent. See Figure 2.

Bread
(Wheat to make 450 g or 1 1b. white pan loaf)

	U.S. *cents*	Percentage of retail *price*
Farmer	3.2	18
Transport, storage, handling, etc.	1.0	6
Miller	0.8	4
Baker-wholesaler	10.4	58
Retailer	2.5	14
Consumer	17.9	100

Rice
(Quantity to produce 1 quintal of milled rice)

	Rupees	Percentage of retail *price*
Farmer	182.0	61
Assembly, transport, handling, etc.	16.8	6
Removal of husk and milling	28.2	9
Wholesaler	50.4	16
Retailer	24.6	8
Consumer	302.0	100

The more services that are given by specialized assembling, transport, storing, packing and processing, and distributing agencies, the larger the marketing margins become. The general tendency is for the amount of the final price charged to marketing to increase proportionately with the level of economic development, i.e., the more advanced an econ-

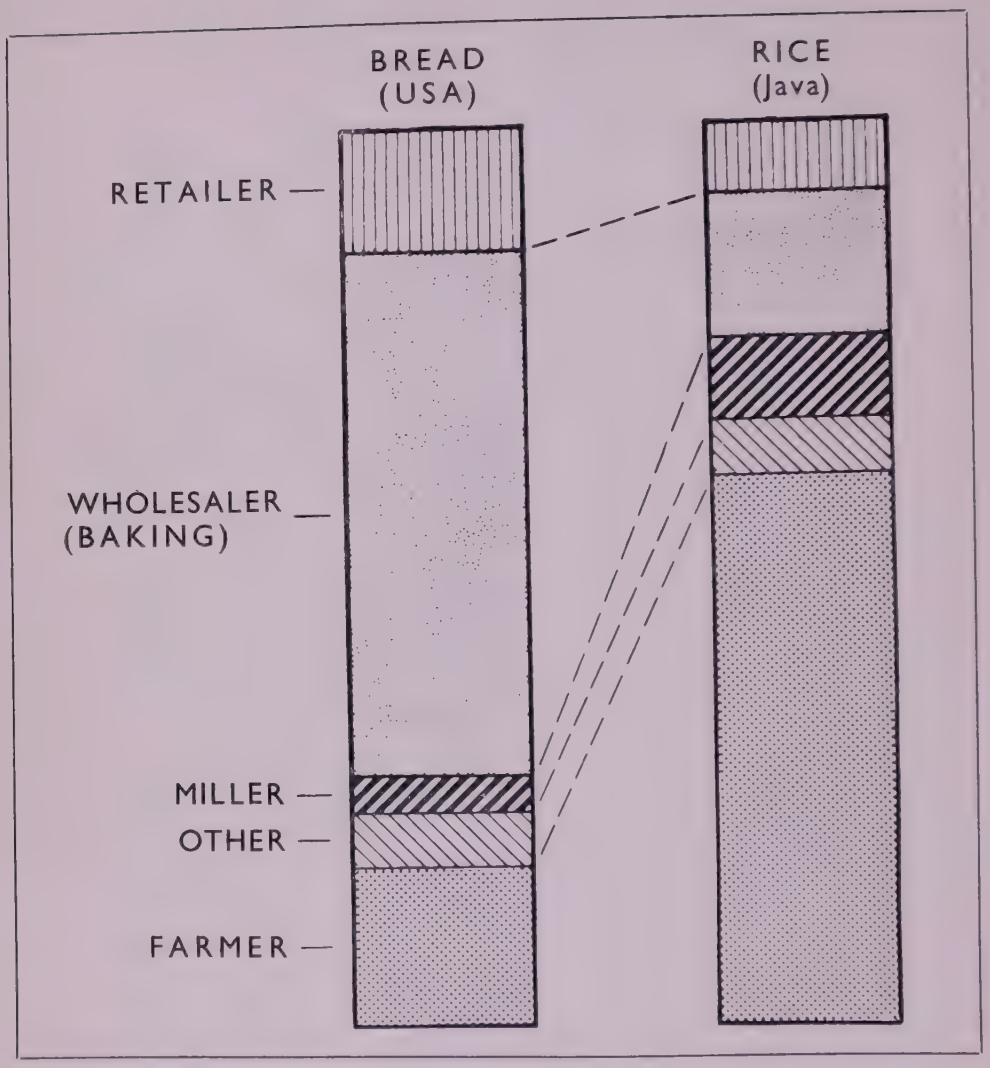

FIGURE 2. Relative shares of consumer price for bread (United States) and rice (Indonesia).

omy, the greater will be the percentage of total supply costs attributable to marketing. On the farm, even the harvesting of field crops and milking of cows, activities hitherto regarded strictly as production, may be undertaken on a commercial basis by specialists as part of a sales contract; the cost of this work would then become part of the marketing margin. Similarly, in the household, the cleaning of vegetables, peeling of potatoes, dressing of poultry, baking of rolls or cakes, all once the work of the housewife, can now be done in advance by branches

of the processing industry and consequently be included in marketing. The precooking and freezing of dinners, sold in ready-to-serve form on plastic plates which are afterwards thrown away, is but a further stage in service to the consumer; all that has to be done in the kitchen is to thaw and warm the meal for consumption.

Almost certainly, the cost of marketing will continue to rise, but not necessarily to the detriment of either farmer or consumer. In the United States, the farmer's percentage of the retail food dollar, currently 38-40 percent, is almost the same as it was before the first world war. Moreover, when marketing margins rise because more services are given, it usually means that the farmer is living an easier life and that consumers are happy to pay for the extra convenience they obtain.

Nothing in the foregoing should be taken to imply, however, that marketing costs are not frequently higher than necessary. Unfortunately the contrary is very often the case. Even where the distance of transport is short and little or no processing is required, and produce is offered to the final consumer, dirty, damaged and decaying, the marketing margin may be enormous and the retail price so high that many consumers cannot afford to buy at all. In April 1959 and again in April 1960, the marketing margin on Cabrobo tomatoes sold in the Recife (Brazil) market was found to be about 90 percent of the retail price. The very high margins prevailing in many less developed countries – especially in view of the prevailing low wage rates there – indicate that " something is wrong, " and that there are basic defects in the marketing system. Such margins are often to blame for many consumers going hungry, or lacking the protective foods they need for health. They also diminish the incentive to producers to grow more and thus help the economy develop.

Excessive marketing costs

The reasons for unduly high margins are many. First there is the weak position of many producers when bargaining with wholesale buyers – because of indebtedness to them, lack of capital, inadequate knowledge of prices and market conditions and, in many cases, lack of competition between buyers at the farm level. Such conditions often allow the wholesalers to obtain higher than necessary profits at the expense of the farmer. Secondly, the wholesalers and retailers them-

selves incur high costs because of inadequate transport, storage and handling facilities and methods which cause heavy losses of produce, deterioration in quality and enhanced market risk. Lack of marketing training and poor organization also augment their costs. A third set of reasons would be the lack of price and quality information on the part of consumers, the absence of effective competition at the retail level and lack of consumer organizations and public measures to protect their interests. Administrative inefficiencies and the maintenance of obsolete legal requirements and public monopolies are also often to blame for high costs. Inefficient marketing, high profits for those in strategic protected positions, and retarded production and consumption of food are the consequence.

Even in the more advanced countries there are numerous food marketing channels subject to the same deficiencies. Much could also be done in these countries to keep the upward trend of marketing costs at a low angle, and to make sure that it does not proceed without a corresponding provision of improved services for both farmers and consumers.

Provision of better means of transport

If there is no practicable way of moving food and other agricultural products from farm to consumer, then such movements do not take place. Access to some means of transport is therefore essential. Small quantities can be carried short distances by hand, or on the head; this is common in local African marketing. Pack animals can carry somewhat greater weights over longer distances, provided there is some sort of path; but large-scale pack movements are limited by the time and number of animals needed. Cheap bulk transport depends on access to a waterway, road or railroad.

ROADS

Inadequate communications and means of transport are often the main reason for the continuance of subsistence farming in many areas and the slow rate of development in others; the population is cut off from outside supplies and markets. A first step, therefore, in the improvement of agricultural marketing is to provide transport facilities where they do not exist at present and would be of benefit. Many farmers are forced, through lack of farm-to-market roads, or high freight charges resulting from inadequate roads, to grow crops other than those most needed and most profitable. This is especially true of perishable crops and bulky produce intended for distant markets. The Kulu Valley and Simla Hills of India, for example, offer great opportunities for fruit production which are at present neglected for lack of quick transport to consumers.

The seriousness of this limiting factor is demonstrated by the rapid development which takes place once suitable roads are built. The link-

ing in 1938 of La Paz in Bolivia with a nearby area, which previously produced mainly coca leaves, promoted such intensive agricultural activity that today much of the farm produce sold in La Paz markets comes from this region. The Friendship Highway recently laid out between Saraburi and Korat in Thailand has resulted in a substantial increase in the production of maize and other crops in that area.

The postwar building of feeder roads in Northern Nigeria led to greatly increased movements of food and reduced the danger of local shortages; it has also resulted in higher prices being offered to producers in the more remote areas, making it worthwhile for them to produce surpluses for sale. The mere prospect of having a road built often spurs production in otherwise subsistence areas. Long-term crops which take some years to mature, such as coffee, rubber and oil palms, were planted along the route of a new road planned in east Africa before construction began.

The improvement of existing roads which are in such poor condition as to involve heavy costs to producers and consumers is also important. A few years ago it cost as much as 4.5 cents per kilogram to transport maize from the Catacamas Valley in Honduras to San Salvador. From maize sold in San Salvador at 9 cents per kilogram, allowing for the merchants' margin, the producers received 2.2 to 2.8 cents per kilogram, or less than the transport cost. Road improvements during the past four years have now brought this cost down by half. The producer is getting part of the saving and part goes in lower prices to consumers in San Salvador. This means that farmers in this particular area in Honduras have a much greater incentive to produce more maize; at the same time, since the consumers now obtain their

FIGURE 3. Horse-drawn vehicles fitted with rubber tires, Tripoli, Libya.

basic grain at lower prices, more money is left to buy other more nutritive foods which will improve their basic diet.

It is estimated that the cost of operating trucks on unimproved roads in Turkey is about 35 cents per kilometer; on better roads it falls to 22 cents per kilometer. Countries with ample labor supplies, but limited capital for the acquisition of transport equipment, would be well advised to put more man-hours into road maintenance and so save wear and tear on their transport vehicles. On the rough roads of Latin America and Africa, a truck has to be written off within a year – at a cost of $2,000 to $3,000 and perhaps $10,000 in the case of refrigerated vehicles. In contrast, the road from Northern Nigeria to Fort Lamy is in fairly good condition in spite of very heavy use, because whole villages of workers have been settled along it to maintain its upkeep.

Better adaptation to farmers' transport needs

Much can also be achieved by the better adaptation of existing transport arrangements to the special demands of agricultural products. The efficiency of the bullock cart, which is the basic means of transport from farm to market in many parts of the world, can be greatly increased by fitting axles and pneumatic tires from trucks (Figure 3). Twice the load can then be carried with the same tractive force, and there is much less wear on soft country roads. Heavy seasonal demands for types of transport for which there is little employment during the remainder of the year can sometimes be met by fitting special bodies or sides to vehicles normally employed for other purposes. Seasonal movements of livestock can be handled in this way; for example, the triple tiered body used on the truck and trailer shown in Figure 4 is detachable, leaving a flat truck after removal.

Railway authorities could help meet the special requirements of different agricultural products by providing rapid services when needed and by adapting their rates to the value of the produce; they might also reduce their charges when produce is packed in authorized standard containers. Point to point concessions on rates for foodgrains in India have generally been more than balanced by the increase in traffic. Acceptance of fresh fruit on passenger trains in Pakistan at special rates has increased traffic markedly.

FIGURE 4. Transport for 300 sheep. A portable loading ramp is carried on the back of the trailer.

LOSSES DURING TRANSPORT

Many agricultural products call for the employment of special transport and handling methods and facilities if they are to reach the market in good condition. Fruit and vegetables, eggs, livestock and many other agricultural products require great care and dispatch in transport, but only too commonly do not receive it. Irresponsibility and lack of thought on the part of the transporting firm is usually to blame. Thus, eggs may be allowed to stand in the sun while the driver eats or rests. Workers and friends may be allowed to ride on the top of a load of lettuce or melons.

Special programs may be needed to insure that the careful producer and handler is rewarded and does not have to share the costs of losses caused by others. Sale of livestock by carcass grade and yield automatically passes losses from bruising etc., to those responsible. At one North American market, haulers bringing in a higher than average number of recently crippled and bruised animals are fined and their names published on a list of careless handlers. Those adhering to approved handling procedures are publicly commended. Insurance does not eliminate transportation losses and should never be regarded as a substitute for effective measures to reduce or eliminate physical losses in marketing.

Transport costs

Ability to obtain return loads is another important factor in transport economics. If the vehicle has to make a long journey empty in order to carry some produce to market, then the operator may be reluctant to undertake this journey at all, or may have to charge very heavily for moving the produce in order to cover the cost of the journey empty. Independent truck operators generally show considerable ingenuity in finding complementary loads, including paying passengers. Sometimes, however, they are hampered by licensing and other restrictions, developed for certain situations in Europe, for example, and applied elsewhere though conditions are different. Thus, certain fruit growers' co-operatives in Malaya found their transport costs considerably increased because they could not use their trucks to carry back industrial products on their return from the city market.

Charges for the transport of agricultural produce reflect not only the costs incurred but also the degree of competition. Generally, the more vehicles that are available, the stronger the competition. Thus, the disposal of a considerable number of army vehicles in Greece led to a sharp drop in the price of vegetables on the Athens markets. The acquisition of vehicles can be made easier by reducing taxes and fees, relaxing import restrictions and facilitating access to credit. The government of Hong Kong has helped to expand food transport facilities for its dense and rapidly growing population by promoting the fitting of engines to local boats.

Refrigerated transport

Availability of road and rail vehicles and ships equipped with ice or mechanical cooling, and the organization of an efficient "cold chain" for the assembly, transport and distribution of perishable produce, are the most pressing marketing problems in hot climates. In the Mediterranean region, for example, grapes, melons and many other fruits and vegetables can be produced early in the year when domestic produce in central and west European countries is not available. High prices could be obtained in these countries, thus providing an incentive for a much more intensive use of land resources in the eastern Mediterranean, if the produce could be put onto the market in good condition. In view of the distance and the perishability of the produce, such an undertaking would usually involve refrigeration. Similarly, fruit such as strawberries, fruit products such as orange juice concentrates, and vegetables such as peas and beans, can be marketed frozen and thus brought to distant markets with little risk of loss, given the necessary low temperature transport equipment. The large livestock production potential of the African savanna and the Ethiopian highlands could also be exploited with great benefit to consumers if there were means available for bringing the meat out refrigerated or frozen. Trials are being made in the Sudan with refrigerated road/rail containers, but many cost and organizational difficulties have to be overcome.

An example of the type of integrated refrigerated purchasing, transport and distribution service needed in so many places is that which moves bananas and other fruit and vegetables from Asmara in Eritrea across the Red Sea to Jedda in Saudi Arabia. Assembling and packing facilities, refrigerated shipping, and a refrigerated distribution warehouse are all under one ownership. Their operations are carefully timed so as to minimize waiting and to ensure that there is space available at each stage.

Air transport

The increased availability and reduced cost of planes is now widening the scope for air transport of food and agricultural produce. Over

4,000 tons of meat are carried by air from Fort Lamy (Chad) to consumers in the Guinea coast cities and the Congo, where fresh meat is scarce. Livestock producers in an otherwise isolated supply area have benefited from a 100 percent increase in prices. This is making possible increased investment in water supplies and disease prevention which will raise their future productivity. Fish is flown daily to Manila from points far to the south, from which it otherwise could not arrive fresh. However, air transport is still relatively expensive and it is used mainly to supply consumers who would otherwise be cut off from supplies of fresh food, and who are able to bear the cost.

Availability of suitable storage

Between 5 and 10 percent of the world's food grain – 5 percent representing about 50 million tons – is lost because of faulty storage, most of it in countries which are short of food and can least afford it. These losses alone would be sufficient to feed 400 million extra people, at a per caput consumption rate of about 120 kilograms. Wider access to better storage could thus stretch the world's food supply very considerably. It would also permit the marketing of grain at lower cost, since that part of the world crop which does reach consumers has to bear the loss of the remainder that does not. Another important effect of deficiencies in storage and credit in the less developed countries is the sharp depression in prices of agricultural products just after harvest. This is the time when many farmers have to sell. Where lack of ability to store discourages buyers, the adverse effect on farmers' returns is a strong deterrent to increased production.

PREVENTION OF STORAGE LOSSES

Methods of storing farm produce and the materials with which storage units are constructed vary in accordance with local experience and resources. In southern Asia, grain is commonly stored in raised bins built of woven bamboo plastered with mud and cow dung; where the water table is low, concrete or brick-lined pits may be used (Figures 5 and 6). Measures to control pests include mixing ashes with the

FIGURE 5. Farmer's grain store built of mud and straw, near Shari River, Chad.

grain and keeping a python in the barn to eat the rats, but losses are still heavy.

The effectiveness of both traditional storage containers and pest control measures, as well as of newly-developed silos and drying and fumigation methods, depends mainly on their proper and consistent use. The problem is not so much one of applying new techniques as of insuring wide and more efficient use of those already available. Careful application of insecticides could reduce insect damage in stored grain to almost nil. It is claimed that with proper aeration and fumigation,

even milled rice can be kept in good condition almost indefinitely. Chemicals which retard ripening are now available, so that apples and pears previously storable only up to 6 months may now be stored 10 months and still be of good quality.

The first step in a program to improve storage methods and facilities is to study trade practice and requirements under prevailing conditions. Full attention should be given to economic as well as technical aspects. Thus, prestorage drying of grains to 10-14 percent moisture content eliminates one of the main causes of storage losses. This can be done easily and cheaply in the fields in most of Asia and the Far East, since harvesting coincides with the dry season, but the pricing system must make it worthwhile. If farmers obtain the same price for a kilogram of grain irrespective of water content, they are unlikely to make efforts to dry it. In areas subject to humid conditions during harvesting, field drying may have to be supplemented by mechanical drying.

FIGURE 6. Underground brick-walled grain store used by merchants in northern India.

Construction of storage facilities

Bearing in mind the shortage of investment capital in the countries where additional storage is most needed and the permanence of most storage buildings, extreme care should be exercised in determining their type, size and location. Specifications should be adapted to the volume and type of produce that can be expected for storage in the territory accessible to the plant, its seasonal distribution, the possibility of complementary uses, and likely shifts in production or in marketing procedure. At Kirmanshah in Iran, to quote one of many such examples, only a fraction of the space provided in the government silo has been occupied. Grain stores have also been erected at points inaccessible to producers during certain seasons of the year, due to poor roads. Sometimes the location of storage involves double transport costs, i.e., from the producing area after harvest and back to the producing area in the off-season. In some instances, the apparent need for storage at central points reflects an uneconomic official pricing policy. If the price does not rise through the season by some 10 to 15 percent, there is no inducement to use such storage as may be available on farms and elsewhere in the production area.

Constant vigilance is needed against the distortion of storage construction projects in the interest of personal and political advantage. In one country, a specialist spent two years working out a plan for the building of 12 carefully located silos. This was overruled by the head of the government concerned in favor of a site on land situated 12 kilometers from a railway and belonging to a family in which he was interested. In another case, a government continued with plans to build a large cold store in spite of expert reports that there was no economic justification for it and that existing facilities nearby were only partly utilized.

A tendency to select designs which would require building equipment and expensive materials in countries where labor is abundant and capital scarce has to be guarded against. A low rate of turnover and lack of appropriate transport equipment may reduce the advantages of bulk handling considerably. Bulk storage and the installation of rapid filling and emptying equipment is most useful at ports and terminal markets where large stocks are assembled for export or internal distribution and where grain must be shifted several times a year to main-

tain its quality. Such facilities may not be justified where grain is stored only once a season, and in small separate lots. Steel silos are easy to construct but are often expensive to operate; they may involve the outlay of limited foreign exchange and in some climates they have been associated with high deterioration losses.

The marketing of fruits and vegetables calls for special storage arrangements since many are prone to early deterioration, especially in tropical climates. To avoid waste and to extend the season during which consumers can be supplied with fresh produce, access to suitable cold storage is essential. It is also valuable where cargoes must be accumulated for shipment to distant markets, and to even out supplies to processing plants. The cold storage facilities presently available in many of the less developed countries are utterly inadequate. There is hardly any cold storage, for instance, in Baluchistan, an important fruit growing area in Pakistan, or in the whole of the eastern Province.

There are two aspects of the storage problem which require much to be done; the first is assistance in the financing of new storage facilities where they are needed and on a scale adapted to those needs. Part of the capital can be contributed by those who expect to use and benefit from the storage when built, thus giving them an interest in seeing that the money is well spent. The second is the training and selection of staff to manage and operate storage plants. Maintenance after construction is sometimes badly neglected.

The Government of India has set up a grain storage research and training center at Hapur and a storage advisory committee to examine problems, make recommendations, and publicize better methods. Special attention is given to the business aspects of storage by small farmers. A central warehousing corporation has been established to channel funds for the construction of warehouses for this purpose and to provide credit on the goods in store. The use of warehouse receipts, whereby farmers can obtain loans on the security of stored produce and sell it without difficulty at a favorable opportunity, is one of the main planks of this scheme.

Owing to their scarcity, the ownership of storage facilities is sometimes an issue in less developed countries. Merchants in control of the limited storage available are said to have profited unduly from speculative operations, and many countries are turning increasingly to public ownership. On the other hand, the following excerpt from a report

on cold storage in Bihar, an important potato area in India, demonstrates the effectiveness of competition: "During the early forties, when there was only one cold store in the State, the rental was $51 per metric ton of potatoes stored for the season. With the establishment of a second cold storage at Patna in 1946 the rate came down to $45. Since then, with the establishment of a large number of units, especially in the Patna and Biharsharif area, there has been a fair amount of competition and the rental came down to $40 in 1957, $34 in 1958, $28.50 in 1959 and during the 1960 season, $22.70 to $28.50 per ton. The rate is, however, higher at places where the number of cold stores is limited and there is lack of competition."

Sorting and grading of produce

Grading means the sorting of produce into different lots of descending market quality, each bearing its own name and label. Quality may be distinguished by size, shape, flavor, degree of ripeness, length of staple (in cotton, for example) or other measurable features affecting the commercial value of a product.

Grading and the buyer

The purpose of grading is to help buyers select the most suitable lots of produce for the uses they have in mind. Accurate grading permits the buyer to purchase more precisely what he wants and is willing to pay for, and to this extent it increases his satisfaction and makes the marketing system more efficient. If grading is not employed, a potential buyer must examine all of the commodity offered before he can know what he is buying (Figure 7). Where buyer and seller are separated by long distances, as in much export marketing, such inspection is impracticable and trading is difficult except on the basis of some mutually accepted description. Produce can be sold on the basis of samples, but disagreement as to whether a particular lot conforms to the sample is frequent. Many sales are also lost because of the time required to receive a sample.

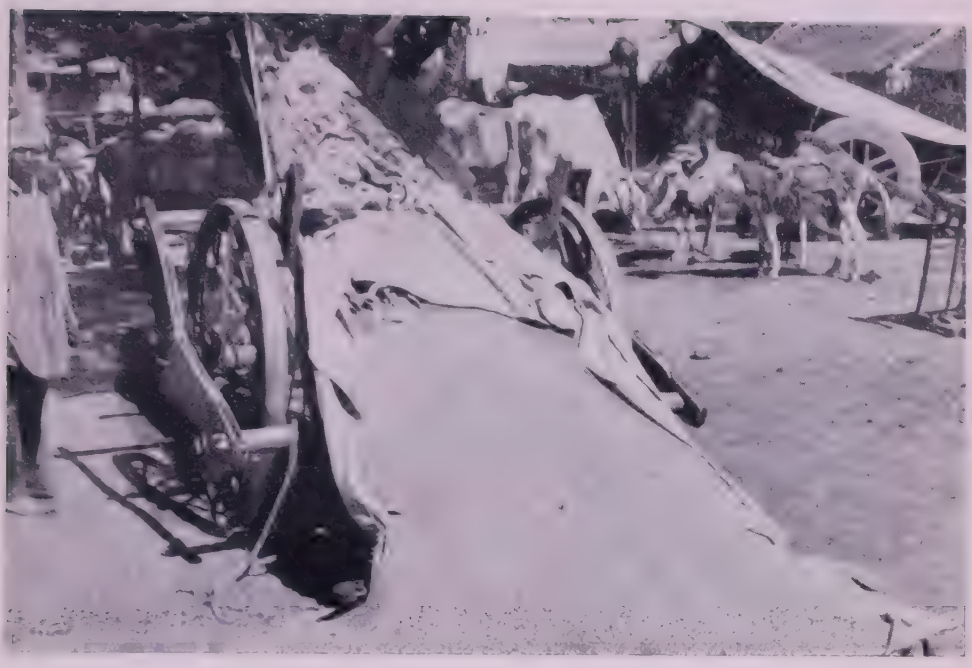

FIGURE 7. Grain tipped on the ground for inspection by buyers for lack of accepted standards. Hapur, India.

GRADING AND THE CONSUMER

Usually consumers buy more of a product, and pay higher prices for it, if they know they will get exactly what they want. If the risk of poor quality is high, they either insist on lower prices or shift to other more dependable products. Accurate grading and labeling are the most precise methods of minimizing the consumer's purchasing risks. Moreover, separation of the supply into a series of grades to be sold at appropriate price differentials broadens the total market. Availability of a low grade generally brings the product within the reach of low-income buyers who might otherwise be excluded. To the high-income buyer the price asked for the first grade may be no deterrent, because he is no longer compelled to buy a mixed lot, part of which may go to waste because it is not up to the standards he desires. Thus, well conceived systems of sorting and grading can make nutritionally valuable foods accessible to low-income consumers who would not otherwise be able to afford them; and this can be done without reducing the average price to the producer.

With proper grading and strict control, the consumer can be assured of the quality for which he pays. In India, ghee is an important food which is used by all classes of people in their daily diet. Since it is comparatively costly, adulteration is very common and there have been many consumer complaints about the quality. A grading system was introduced about 20 years ago whereby the ghee is examined by a chemist, appointed by the marketing adviser of the central government, and a certificate given. On each case is marked the grade, date of grading and the code number under which it was analyzed. To check the labeling, samples are taken at markets and examined; where the contents are not according to specification, the people responsible are penalized. Ghee that is graded has become popular with consumers. In Calcutta, for example, only ghee graded under the Agmark system can be brought into the city.

Grading, and the study of the prices and costs of different grades, is also one of the most effective ways of informing producers as to what consumers want. A clear indication of the value consumers place on specific grades permits producers to plan accordingly and provide the maximum quantity of those most sought after. The expansion of Virginia tobacco production in India has, to a great extent, been influenced by the introduction of export grading.

Methods of grading

For a grading system to be successful there must be a clear practical economic justification, not just the application of administrative logic. A standardized grading system, for example, has less practical value where both buyers and sellers can be physically present to inspect produce at the point of sale, and where the pattern of trading is one of small dispersed transactions difficult to supervise. In much domestic marketing of fruit and vegetables, from nearby farms, for example, it offers fewer advantages. For such reasons, systematic grading has gone furthest with export crops, and where large wholesale purchases are made (Figure 8). Failure to consider such factors has led to difficulties in implementation and may sometimes jeopardize plans to establish grades under conditions where they would be appreciated.

Grade specifications and standards should be designed to be useful

FIGURE 8. Grading of oranges in a new packing station, United Arab Republic. Blemished and lower quality fruit are removed as they pass on a conveyor which then takes them to a mechanical sizer.

to as many producers, traders and consumers as possible, and easy to apply. An attempt in the Philippines to indicate copra quality in terms of free fatty acid content at the farm level proved too complicated and expensive for the producers involved. If the relationship could be established between manufacturers' grades determined chemically, and more easily measurable characteristics, such as moisture content and color, then the initial buyers' grades could be set up on the latter basis. Similarly, traditional descriptions based on place of origin, such as *Ngasein Loonzain* are best replaced, so far as is feasible, by definitions in terms of size, color, cooking and nutritional quality. The efforts of FAO specialists engaged to improve the preparation of hides and skins have been prejudiced because, even after improvement, the hides were still sold on international markets by place of origin and brought the same price as before.

If authorized grades are to obtain the respect from buyers that makes them worthwhile, then it is crucial that the initial sorting and label-

ing should not be cancelled out by defective handling and sales practices. Poor packing of fruit resulting in physical damage will outweigh any difference between graded and ungraded fruits. Poorly equipped markets also detract from the value of grading. Eggs graded A will not do credit to this designation if afterwards they are held for long periods in high temperatures.

There should be no relaxation of export standards because a ship is waiting, because supplies of first grade produce are not available, or because the owner of a particular lot is wealthy or influential. A single consignment of inferior quality may suffice to put the good name of the produce of the exporting country in jeopardy; or, in the case of new exporting countries, give their produce a bad name from the beginning. To avoid delay and pressure to relax standards, it is often advisable to make a preliminary inspection at the point of packing and a second sample check at the port of shipment.

Good packing and careful handling

For efficient marketing of agricultural products, particularly perishables, careful handling and suitable packing is essential, especially in

FIGURE 9. The sharp edges of the palm stems used to make these crates cut and mark soft fruit and vegetables.

a tropical climate. If green vegetables, for instance, are packed in heavy sacks or piled on to a lorry in bulk, they will heat up quickly at the center, wilt and rot. Deep baskets of conical shape are in standard use in the Near East to carry fruit from farm to selling points. The lower layers of delicate fruit, like grapes and tomatoes, are damaged by the weight above. The characteristic palm stem containers with sharp inside edges which are used in the United Arab Republic to carry tomatoes and much other produce are a chronic cause of losses (Figure 9). Another source of wastage is the bruising of perishable fruit on improperly loaded vehicles traveling at high speeds over rough roads. Dr. Stahl, the Miami University food technologist, recently estimated that between one third and one half of all the fruit and vegetables harvested in India are lost because of poor handling and marketing methods.

Not only do these losses cut down the supply of food reaching consumers, they raise the price of the remaining portion which must bear all the costs. This explains in great part the very low share of the retail price of many vegetables and fruits which goes to the original producer. If retail prices of these important foods are to be reduced, and the growers given an incentive to produce a larger quantity and better quality, then present packing and handling methods must be improved greatly.

Much can be achieved by simple improvements in method and organization without expensive cooling and other mechanical equipment. In Afghanistan, Iran and Pakistan, fruit is commonly sold to contractors while still on the tree. It is picked by outside labor paid on the basis of the quantity picked. Not only is fruit picked at different stages of maturity, but the tree may be damaged and its output reduced the following year.

Better instruction of growers, merchants and their employees on the correct time to pick fruit and vegetables, when tomatoes are just turning yellow, for example; on the most suitable containers to use; and on co-ordination of picking and marketing plans, would avoid much deterioration and loss. At present many Peshawar peaches, packed when ripe, spoil under the handling they receive on their way to Lahore and Karachi; on the other hand, Kandahar apricots are often picked too green and fetch only low prices in Pakistan because they never attain their full flavor. Delicate fruit should be carried in shallow boxes. These can be stacked on each side of a frame, designed for pack

animals, and constructed at very little cost. Such boxes can be used over and over again, just like the customary deep containers.

Too often, fruit and vegetable traders see nothing wrong in their present practices; they accept heavy handling losses as normal and assess their prices and margins accordingly. To convince them calls for practical demonstrations of the results of better methods. At an FAO marketing training center held in Cairo in 1959, representatives from one eastern Mediterranean country were confident that the produce they exported was far ahead of that from others. That it was still subject to many defects became evident when a series of photographs of fruit sent by that country to the Covent Garden market in London were displayed side by side with photographs of corresponding fruit sent from California.

Training of packers

Improvement is often more a matter of foresight and patience in instructing local workers rather than the installation of expensive equipment. This is clearly illustrated in the following account of the development of fruit exports from a southeastern European country.

" A difficult problem for the exporters was the lack of skilled workers who would pick and pack grapes carefully. It took some years to train them; in the beginning members of the growers' families worked regularly at the packing houses and watched the other girls, so that their grapes should be handled and packed with care. Later on, fruit packing became a well paid job and many girls from the towns, even college girls, worked as packers during the vacations. For the British market, a luxury " Extra Special Grapes " pack was used. It consisted of only three clusters of grapes (1.5 kg each) in a square flat box with a paperboard cover and cellophane window. Two girls worked together: the first girl selected a suitable bunch of grapes, picked it, cut out some smaller or wasted grains with round-ended scissors, and put it in the box which was carried by the second girl. In this way decay due to penetration by bacteria and fungi was minimized; the grapes suffered no damage and conserved the bloom which is essential for good preservation and market presentation. At the Covent Garden

market in London these "Extra Special Grapes" brought very high prices, generally three to five times more than similar grapes packed in flat 10-kg boxes.

"At first, careless picking and packing, and the high percentage of waste which resulted, discouraged many exporters. Eventually, after the pickers and packers had been trained, better ventilation of the flat boxes had been provided for, and a correct selection of bunches at the proper state of ripeness and with a high sugar content had been achieved, they obtained good profits."

Packing stations

Where there is a substantial production of fruit or vegetables in a particular area, there are often advantages in concentrating packing operations at one place. It can usually be carried out more accurately and consistently by workers who learn from each other and become skilled in particular tasks. The use of standardized packing materials makes transport easier, and attracts consumers; these materials can be purchased more cheaply if ordered in large lots. The need for systematic packing is greatest when fruit must travel long distances, withstand several loadings and unloadings and be sold on markets where there is much competition. However, packs originally developed for the export trade are often subsequently adopted for higher income domestic markets. It was observed recently in the wholesale market in Santiago, Chile, that once some merchants began to offer individually wrapped apples and pears in standard flat cases, loose fruit of similar quality proved very difficult to sell.

Packing stations need little more than a covered space and some very simple equipment. As it comes from the farm, the fruit is placed on a table with raised sides or on a sorting conveyor. Workers stand along each side, pick out the various quality grades and put them in different boxes (Figure 10). As the quantity handled each season increases, the introduction of machinery becomes more profitable. In Italy, for example, a sizing machine for apples becomes economic when the quantity handled reaches 20 tons per day. At 50 tons per day, several conveyor and grading belts are warranted.

FIGURE 10. Wrapping and packing oranges in attractively labeled cases. United Arab Republic.

PACKING AND SORTING EQUIPMENT

Generally, apples, pears, citrus, gherkins, peas, and beans all require their own particular set of equipment. It is essential, therefore, to seek expert advice before buying any elaborate packing machinery. Packing and sorting equipment designed for use in the California raisin industry, for example, did not quite meet currant packing requirements in Greece because it broke the more delicate skin of the currant grapes. Adoption of the more elaborate conveyor packing systems often requires too many changes in preliminary and subsequent handling and packing. Dependence on packing materials, etc., which must be imported, also involves supply risks when foreign exchange allocations and customs releases are uncertain. Clearly, packing houses should be sited conveniently for rail, road, or water transport.

Failure to keep handling and packing equipment clean and in good condition is only too common. Often, simple precautions in handling milk, meat and eggs would avoid contamination and deterioration losses. In many parts of the world cows and buffaloes with dirty udders and flanks are milked without being previously washed; milk handlers are frequently seen with dirty hands and clothing and insanitary habits; filthy cowsheds are common. Milk can be found exposed in many

retail milk shops and containers to manurial and other sources of contamination; the practice of putting leaves, paper and straw over milk to reduce spilling from open cans is widespread; and there is frequent adulteration of milk with dirty water. All such practices can be discouraged by education and proper supervision.

Wrappers and containers

There are also situations in the less developed countries where the introduction of new types of packaging and containers would be practical and bring great benefits. In Mediterranean countries where wood is scarce, paperboard cartons may offer immediate economic advantages. The use of plastic and cellophane wrappers opens the way to more sanitary handling as well as appealing to consumers.

Enterprises packing food products for sale in the less developed countries would do well to watch for potential uses of the package as well as the contents. Cigarette retailers in Nigeria often pay more for a can of 50 than they expect to obtain for the cigarettes when sold in small lots or perhaps singly. The retailers' margin is derived from the sale of the container. A British exporting firm wondered why its jam sold slowly in Burma as compared with a Japanese jam; the rival product was sold in jars with replaceable caps convenient for re-use. The apparent preference in a Far Eastern country for rice packed in polythylene bags of standard weight – as revealed by a market research study – was explained by the re-use value of the bag rather than a genuine interest in rice already measured and conveniently packed.

Establishment of plants to process produce into more convenient and useful forms

The establishment of processing plants often brings great advantages to the farmers who supply the raw materials. It gives them a continuing outlet for produce which might not otherwise be able to reach a market. As a result, they produce more and thus add to the food resources of the world. Consumers benefit equally in that more food is placed at their disposal, usually in a form convenient to store and needing little extra preparation for consumption.

Sometimes processing is undertaken not so much because consumers appreciate it directly, but because there is no market for the fresh produce at the time it is ready for sale. Food consumption takes place at a fairly steady rate through the year, whereas many fruits and vegetables, for example, mature only during a short season. The quantities which are surplus to immediate demand must be canned, dried, squeezed for juice, processed in some other manner, or else be largely wasted. They may not always be as appealing to consumers in these forms – consumers in many of the less developed countries much prefer fruit and vegetables fresh daily – but they constitute valuable food resources. If the processing (canning, drying, smoking or salting) is carried out hygienically and with careful attention to quality and is followed up by suitable consumer promotion – attractive labeling, demonstration of cooking methods, etc. – it can contribute greatly to producer and consumer welfare.

Drying and canning

One of the first considerations in undertaking drying and canning is the simplification of transport requirements. The volume and weight of a bulky agricultural product can be reduced greatly and the risk of loss and need for special handling eliminated. Livestock raisers in Kenya and Madagascar have gained access to valuable outside markets by channeling their stock through canning plants. Heat sterilization eliminates the risk of animal disease transmission; the cans are easily moved and preserve the quality of their contents until they reach the consumer (Figure 11).

The establishment of a processing enterprise can sometimes convert fruit or meat of relatively low quality into a very acceptable food product. Cattle raised in the dry zones of Africa do not give meat of first quality. It can be combined, however, with fat from other parts of the carcass to make a good canned product. An FAO marketing specialist has recently proposed that a citrus processing plant be set up in Libya to prepare juice and fruit extracts. The class of fruit to be used would be difficult to sell in the fresh fruit market because of varying size and type, superficial blemishes and poor appearance. The efficient use of by-products is also often dependent on the installation of improved processing equipment. The manner of handling rice bran

FIGURE 11. Collecting carcass meat for canning in Kano, Nigeria, a market and transit center through which a large number of cattle pass annually.

in Japan indicates that valuable oil and livestock feed are lost in other countries. In many slaughterhouses, the handling and processing of by-products is crude and wasteful.

CONTRIBUTION OF WHOLESALE PROCESSING TO MARKETING IMPROVEMENT

In some areas, the establishment of processing enterprises for animal and crop products has speeded both the development of organized wholesale supply markets for meat animals, milk, etc., and of marketing arrangements to distribute different types of finished products. At the outset there may not seem to be a demand for more of such products, but it may appear once they are put on the market at an attractive price and advertised. This is evidenced by the rapid inroads made on the imported evaporated milk market in the Philippines by local suppliers of canned "filled" milk made from domestic coconut oil

and imported nonfat dry milk. While not a complete substitute for milk, in baby feeding, for example, this product fills a very important need in the local diet and is offered retail at about 70 percent of the price of evaporated natural milk. Sales of this "filled" milk rose from 1 million liters in 1955 to over 43 million in 1959.

The development of specialized processing and wholesaling facilities is often a fruitful way of tackling the problem of interdependent small-scale production and marketing enterprises. It is difficult to obtain from a large number of small farmers produce of the uniformity which is needed for attractive presentation to consumers. Similarly, the assembly of small surpluses from subsistence producers presents problems of organization and uncertainty in supply that hamper efficient marketing. At the other end of the chain, retailers operate on a small scale at high cost, partly because they cannot obtain wholesale supplies except by personal inspection and bargaining.

A wholesale processor of sugar or vegetables can give farmers confidence to produce on a larger and more specialized basis by offering them contracts in advance of planting, which guarantee them an outlet at a specified price. In return, the processor can obtain the degree of control over production and harvesting practices, and the timing of deliveries, needed for efficient operation of the plant and for the preparation of a standard quality product. The food retailing trade benefits because the processing enterprise generally constitutes a source of wholesale supplies that are dependable in character and simple to order. The retailer can consequently handle a larger quantity with the same staff and accept a lower margin (Figure 12).

It is not to be supposed, of course, that a mutually satisfactory structure of this type can be built up easily. Many farmers have experience of the methods – manipulation of quality appraisal, raising the percentage of "rejects," etc. – to which some processors bound by contract resort to reduce their purchasing costs when the price of the processed product falls below expectation. It is important, therefore, that the contracts between supplier and processor take such possibilities into account and make provision to meet them. Similarly, the processor-wholesaler may have to wait a considerable time until the proceeds from sale of the product come in, especially if much of it is supplied to retailers on credit.

The first step in considering the feasibility of a new processing enter-

FIGURE 12. Farmer unloading bell peppers at a canning plant in the Badajoz development area, Spain. Production has been stimulated by supply contracts assuring an outlet at a prearranged price.

prise is to determine the existence of an economic opportunity and what its exploitation involves; the next is to estimate the relative advantages of alternative processes and equipment, taking into account local operating conditions and the personnel available.

The high cost of sugar and of cans or other containers is often an obstacle to the development of preserving and packing industries in many of the less developed countries. Where a large part of the cost of sugar is tax, rebates to processors may be an effective means of promoting the preservation of fruit. Care is needed to see that the factors on which cost calculations are based are of an enduring character. Whereas the price of a raw material may be very low before a processing plant is built, it may rise rapidly afterwards.

A word of warning is needed on the competition which new processing projects face on world markets. The reputation for high quality of the leading brands of canned fruit and the wide demand for them have not been built up on the seasonal processing of small lots surplus to the needs of local markets. The major fruit and vegetable processing enterprises are based on the cultivation of large acreages of produce in accordance with certain uniform quality and ripening schedules. Their quality control procedures are rigorous and much money goes into sales promotion. Processing for domestic markets is the soundest basis. with the possibility of exports secondary. Here temporary licensing or exchange control restrictions which inflate the cost of imports may make local processing seem attractive, but the possibility of a change in import policy has always to be considered.

Processing plants should not, for the sake of engineering considerations, be constructed on a scale for which local supplies do not provide an economic turnover, unless there is a real likelihood that the existence of the plant will expand production commensurately. In several parts of Africa, meat packing firms have found out too late – after a plant had been installed and put into operation – that the area served could not supply enough livestock to enable it to run at optimum capacity.

Better market facilities and procedures

Convenience in finding exchange partners has led people to conduct most of their trading activities at recognized places and times. In this way, specialized markets have grown up – local assembly, local retail, central wholesale, etc. – as well as exchanges where commodities can be traded on the basis of samples and description only. In many parts of the world, buyers and sellers of livestock, food grain or vegetables simply gather on an open space and arrange transactions by private negotiation. There are many disadvantages however: it is difficult to determine the market price; some market users may be cheated, or subjected to unfair pressures; animals may be hurt and produce damaged or stolen.

Even the facilities provided for wholesale markets in large cities are often inadequate for efficient assembly and distribution. Many lack overhead covering, light, water, and sanitation. In many cities the population has increased greatly, but their markets have not been enlarged correspondingly, nor maintained properly, and are so crowded as to hamper movement and sales. The existing markets are frequently situated in the old parts of towns and involve bringing produce through narrow congested streets. New residential areas may not be served adequately. Of three large Latin-American cities studied recently, none has a central wholesale market. District markets and retail shops are supplied by many small merchants bringing produce in small lots from rural markets. Supply by these means is irregular, and has led to wide fluctuations in prices and high costs.

Sales methods

In most well-run local assembly markets, a private firm, a farmers' co-operative or a municipality provides an enclosed space for the use of buyers and sellers, display pens for animals and a covered sale area. Sales may take place by public auction or by private negotiation, subject to rules which protect the buyer against fraud, and insure payment to the seller before his property leaves the market. Auctions have the advantages that the seller, farmer or trader is reasonably sure of securing the market price; the seller wastes no time; the seller runs no financial risk; the auction organization sees that he is paid and is in a strong position to take measures against defaulters; the auction authorities can lay down quality standards and enforce them; buyers and sellers attending the auction can obtain personally a clear impression of prices and of price differences with respect to quality. In addition, the price data collected can be used as a basis for an unbiased price and market information service.

A main concern at these markets is the avoidance of collusion between buyers. The market should be big enough to attract a number of buyers; display of prices obtained at this and other nearby markets also helps.

In India, market committees on which farmers and wholesale buyers are represented have been able to improve considerably the traditional unregulated procedures. Intermediary " brokers " or commission agents

who earn a living by bringing buyer and seller together for a fee, can be required to deposit a cash security for their status in the market and forfeit their license if they harass or deceive market users. Cash sales can be required and the terms of sale recorded by a market clerk. Market charges can be fixed and advertised; independent representative committees can be set up to arbitrate on disputes. The market committees can also provide amenities, such as shelter for stock and attendants, water and fodder for animals.

Standard weights and measures are a great convenience in marketing, but in many areas they are still not in general use. The weight pan on a fruit and vegetable trader's balance in Iran may contain various objects, including metal parts of engines and different size stones. Weights and measures also vary from village to village. In Iran, one " man " is the equivalent of 6 or 8 kilograms, depending on the locality, while the quantity contained in a measure differs according to whether it is heaped or " struck. "

It is not enough to pass legislation requiring the use of standard weights and measures; the necessary equipment must also be available to traders at prices they can afford. Exemption from duties and eligibility for cheap credit or other financial assistance may be necessary in low-income countries where weighing equipment must be imported.

In areas of specialized production of fruit, vegetables and tobacco, for example, the Dutch auction system may be advantageous at local assembly markets. Produce is sold by sample; the highest bid is indicated by a pointer on a clock. In the Netherlands, these auctions are generally run by growers' co-operatives in conjunction with price stabilization schemes to moderate the sharp fluctuations to which auctions are sometimes subject.

Design and planning of markets

Central wholesale markets are generally operated by municipal authorities, a traders' association or a market corporation under some public supervision. Great foresight is needed in determining their location; it should be convenient for access from the main production area and for retailers, and be adapted to modern forms of transport. The layout should allow free movement of vehicles to and from whole-

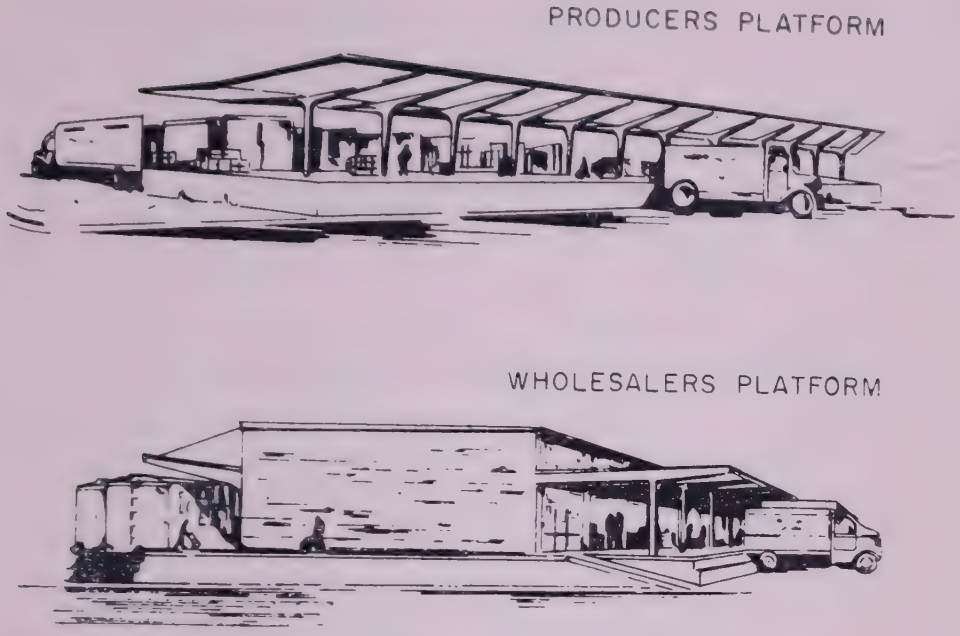

FIGURE 13. Plans for producers' and wholesalers' stands: platforms facilitate loading and unloading. Rail and road access at the rear permit easier delivery to wholesalers.

salers' premises and adequate parking space. Pavilion-type stands, adjustable in size by the use of partitions, have many advantages; they should be well lighted and ventilated. Sorting and packing areas, refrigerated storage for perishable produce, telephone, banking and other services are important. Competitive buying and selling is fostered by the presence in the market of some farmers and farmer co-operative commission agencies; certain sections are usually reserved for them and designed accordingly. Suitable market regulations can be worked out in collaboration with users' representatives and a market authority established to apply them impartially, maintain the market in good order and settle disputes. Plans for various types of markets have been assembled by FAO and can be obtained on request (Figure 13). Information on regulations is also available, including those governing the operations of commission agents, the constitution of market authorities and methods of financing.

In preparing plans that will involve long-term commitments for the future, consideration of possible changes in transport routes and marketing patterns is important. In North America and northern Europe,

the trend is for retail shops to buy directly from country packing houses and wholesale shippers. Many purchases are made by contract or by telephone without personal inspection of the produce, which then need not pass through a wholesale market. Similarly, integrated wholesaling and retailing enterprises only use the wholesale market to acquire supplies not available through the marketing channel under their control.

Comparable developments can be expected in other parts of the world where regular access to supplies conforming to agreed specification is feasible. However, local and central wholesale markets are likely to retain an important place wherever the bulk of the supply comes in unstandardized lots from small farmers and is distributed to a large number of small retailers. Even where retailing is undertaken largely by supermarket chains, a good proportion of the supply of fresh produce is still likely to pass through central markets. There is a practical limit as to how far supermarket buyers can commit themselves to specific supply sources and still retain the purchasing flexibility needed to meet their consumers' needs, in the face of climate, transport and other factors which cause variations in harvest yields and market arrivals.

Collection and dissemination of market information

Producers, traders and consumers all need accurate information on supplies, prices and demand prospects if marketing mechanisms are to work efficiently. Farmers require it if they are to plan their crop and livestock production programs to the best advantage, and market their output efficiently. Lacking information on the prospective value of a crop and where it could be realized, farmers may not even try to grow some crops in active demand for which their land is suitable. It is also important that they be aware of the prices likely to be offered at alternative markets and at different seasons of the year. The knowledge that a farmer can compare the prices he receives from one trader with those paid by other traders influences country buyers in offering fair prices.

Market information and supplies

Access to better information enables wholesalers to develop potential consumer demands and producer supplies which might otherwise have

been neglected. It reduces their business risks and thus enables them to operate profitably on lower margins with resultant benefits to producers and consumers. When up-to-date accurate information is lacking, local buyers seek wider margins as a hedge against price changes in distant markets of which they may not be aware. Inadequate market information is a frequent cause of waste among perishable fruits and vegetables.

In the absence of current news, produce from distant points may be loaded onto an already satiated market, to be sold at distress prices or moved elsewhere with considerable cost and loss; meanwhile, in another district, an unnecessary shortage of supplies may force consumers to pay high prices. Transport and storage agencies also depend greatly on advance information in planning their schedules to meet seasonal agricultural requirements. Because farmers and country dealers only receive information belatedly and indirectly, a sheep that cost $1.90 at 200 kilometers from Djibouti, for example, might be bought for as much as $3.70 to $4.70 by the retail butcher in the city. Speedy dissemination of information and provision of suitable transport would enable country buyers to channel in new supplies quickly and prevent prices in the city reaching such heights, at the same time raising prices at the point of production.

Inadequate information on current and prospective market conditions is a characteristic weakness of marketing in less developed countries. It is mainly due to the large number of small enterprises involved, weak communication systems, illiteracy, and the administrative difficulties of organizing the public collection and dissemination of price and other useful information in such an environment.

Market information and prices

Difficulty in comparing prices also prevents consumers from buying efficiently, and so keeping down retailers' margins. It also hampers them in adjusting their demand to the qualities and quantities on the market when these vary seasonally. Open price labeling is rare in retail markets in the less developed countries. Generally, retailers prefer to fix prices for each transaction and in this way obtain as high a price as each customer is willing to pay. Ability and persistence in bargaining

plays an important part, with such factors as the personal appearance of the buyer being a critical guide to the seller. Wherever prices are not indicated, the buyer is in the disadvantageous situation of being unable to compare the effective prices sought by different retailers without a tedious process of interrogation (Figure 14). It is correspondingly difficult to find out where he can obtain the best quality of produce for the lowest price offered. The effectiveness of competition in assuring the best possible service to consumers is cut down accordingly.

The value of a reliable market news service in such conditions was well demonstrated when one was established in Amman (Jordan) in 1956 with the aid of the radio broadcasting company. The range in retail prices of fruit, pulses and vegetables in the different city markets narrowed considerably as a result.

The presence in a market of at least one retailer with price labels

FIGURE 14. Retailers of processed cassava; alternative sources of supply, but with no prices indicated, Leopoldville, Congo.

exhibited openly is a valuable basis for bargaining by the consumer. If no private retailer can be induced to do this, a retail stall maintained by a co-operative of consumers, or the municipality, is advisable.

Market information and Government Policy

The paucity or inaccuracy of information on production, consumption and stocks available to governments in many countries will hinder the successful implementation of important national policies. For the effective administration of price and supply stabilization programs, accurate estimates of forthcoming production, storage carry-overs and internal movements are essential. This type of information is especially important in countries where the government is responsible for meeting marginal deficits or facilitating the disposal of surpluses. Excessive supplies have sometimes been imported because the full extent of domestic stocks held privately was not known; and commodities have been exported from countries which subsequently had to import further supplies to meet a deficit which only became apparent later in the year. In many cases, poor production statistics and crop reporting have delayed the movement of produce between surplus and deficit areas and thus exaggerated discrepancies in price.

As appreciation of the value of market information has become more widespread, there have been complaints from many countries of inadequate services. Efforts to overcome this deficiency are being made in various directions – by government statistical and marketing departments, by specialized news-collection agencies, and by banks, universities and other interested public and private institutions. Nevertheless many of the more immediate requirements of farmers, traders and consumers have still to be met.

Market information services

The collection of accurate news of prices, especially in relation to quality, supplies, sales and stocks, generally calls for the services of trained staff working under the supervision of a technically qualified agency. Because central provision of widely needed data narrows the range over which farmers, traders and consumers must seek information themselves,

it is generally recognized as meriting the expenditure of public funds. A sound approach is to:

(*a*) investigate the need for information additional to that already available and determine what data would be useful, to whom and at what time and place;

(*b*) ascertain the sources from which such information could be obtained, by what means and at what cost;

(*c*) organize an appropriate system of assembly and dissemination.

Main issues in the preparation and dissemination of market information are the specification of its objectives, recruitment of suitable personnel and establishment of effective administrative machinery.

The methods to be used depend on the need for speed in dissemination. Fast accurate communication is most important for the trade in perishables. In many parts of the world, consumer markets remain unsatisfied and producers discouraged because information on the type and quality of produce needed and available arrives too late. Arrangements for the collection, appraisal and dissemination of digested market news to producers, processors and handlers should be built around the best means of communication available.

In India and Pakistan, the use of loudspeakers and blackboards at the entrance to local markets has been found the best way of reaching the largest number of farmers and traders. The market committee at Montgomery, in West Pakistan, used a messenger with a bicycle to communicate wholesale prices to farmers in the surrounding villages. Each day he left price slips at village schools within a radius of 15 to 25 kilometers. The headmasters gave copies to boys from different villages who read them out to the farmers during their evening gatherings. Discrepancies between the prices of wheat and cotton at the Montgomery central wholesale market and the subsidiary markets, like Harappa, were reduced considerably, to the farmers' advantage.

Improved conditions of sale and access to credit

Adverse conditions of sale and high credit charges do much to widen the gap between the price paid by the consumer and that obtained by

the producer. Moreover, they tend to be found most frequently in precisely those areas where consumers can least afford extra costs and where a stimulus to production is most needed.

An investigation in India of the marketing of rice, the basic food in many of the most populous regions, revealed an impressive array of unjustified and duplicatory charges. Deductions in kind, to compensate buyers for losses in weight due to impurities or dehydration, were often made automatically whether or not the condition of the produce justified it. In some Indian markets this deduction amounted to 3.5 percent for rice and 4.5 percent for paddy. Other practices unfavorable to the seller were the taking of large samples without payment, and unnecessarily high weighing and handling fees.

Market charges

The collection of market charges and tolls on goods entering city boundaries is still awarded to the highest bidder in some European, Latin-American and Asian countries. In 1954, the collection of municipal dues at the central market in Amman was awarded to a group of merchants for $84,000. The sum actually collected from market users that year was $182,000. In addition to the legitimate charges payable, sellers are often obliged to tip the municipal employees at the terminal barriers or octroi posts, if they are to avoid inconveniences. That such tolls and exactions are frequently more than the traffic can bear is evidenced by the number of instances where markets have been driven outside municipal boundaries.

Much of this can be eliminated by the transfer of responsibility for market supervision and the maintenance of favorable exchange conditions to bodies representative of the producers, merchants and consumers concerned. In many instances, municipal authorities and local officers of the central government already have the power to carry out such reforms. Elsewhere, legislation may be needed as, for example, the Indian State Agricultural Produce (Markets) Act, which empowered state governments to regulate agricultural markets. Under this act, market committees with a 50 percent agricultural representation were empowered to lay down conditions of sale and charges and set up disputes subcommittees to deal with complaints. Many of these laws make provision for auction sale facilities and insure that farmers

FIGURE 15. Auctioning groundnuts at the Sangli regulated market, India. A clerk employed by the Market Committee records the price.

are paid in cash on delivery of their goods; if trade credit is desirable, it can be given under the supervision of the market authority. The regulations established are enforced under pain of fines, and suspension or permanent exclusion from the market (Figure 15).

Some 700 of the 2,300 wholesale assembly markets in India had been brought under this system by 1960. It has simplified market structure and procedures and considerably raised the efficiency of marketing at the primary level. The standardization of market charges alone has saved farmers the equivalent of $15 million annually. The more favorable sale environment has given the smaller farmers much more confidence and the proportion of market offerings brought in by the growers themselves has increased substantially.

Detrimental sales practices

There are many other situations where the prevailing sales practices distort prices and differentials in quality to the disadvantage of producers and consumers. In the citrus growing area of Iran, most orchard owners sell their fruit three to five months in advance of maturity in order to obtain cash advances. This provides some insurance against the risk of total loss from crop damage. However, if the growers in one village near Meshed had sold their 1960 crop even at the seasonally low price prevailing at picking time, they would have obtained over $10,000 more for it than they actually received.

Sales practices frequently continue after the conditions which first led to their adoption no longer apply. Cattle are still sold in Honduras on the basis of height, an attribute valuable for long distance travel on foot but often inversely related to meat quality, even after movement by road vehicle has become feasible.

Farmers' credit difficulties

The need for business arrangements to enable farmers to obtain short-term credit on produce in storage, and thus be able to wait for a favorable market opportunity has already been mentioned. In most of the underdeveloped countries such facilities are only available to the larger merchants, leaving the smaller farmer under pressure to sell his produce during the post-harvest depression in prices. The general shortage of credit in the poorer economies is a continuing handicap to farmers in bargaining with various buyers over the price of their produce. Moreover, because of their lack of financial resources many have to borrow in times of scarcity and need, especially before harvest, and become heavily indebted. They are consequently often obliged to sell their products through the moneylender, year after year, at prices substantially below those ruling in the free market – and reported by statistical agencies – as a condition of renewing the loan.

The rate of interest charged to small producers in economically underdeveloped countries often seems prohibitive by commercial standards elsewhere. Instances are often reported of 10 percent per month (120 percent per annum) or more for small tenant farmers – though the proportion of agricultural output affected by such charges is difficult

petitive rate; this criterion still prevails substantially in most economies. This mechanism has, however, been supplemented in an increasing number of countries by allocations of funds in accordance with planned development programs. Where governments are directing the use of capital accruing from the issue of guaranteed bonds, from international loans, and from such special sources as petroleum royalties, etc., then the claims of agricultural marketing improvement projects merit high priority. Among the first is the financing of processing and storage plants which would open access to new markets and encourage additional or improved food output. The permanence of the plant may justify amortization over a long period, but the need to wait so long may deter private investors. It may also be necessary to operate at less than cost in the early years to attract business and stimulate the agricultural output which will eventually make the investment pay. An example of such a venture is the Colonial Development Corporation slaughterhouse at Lobatsi, Bechuanaland, through which local livestock find a market.

In Latin America, public development corporations and banks have financed, built and operated in their early stages processing plants designed to stimulate agricultural and marketing development. Once established, these slaughterhouses, rice and sugar mills, grain drying and storage plants, etc., can be leased or sold to private operators, and the capital gradually withdrawn for investment in other new projects.

In all such programs to develop particular sections of a marketing channel, the importance of recognizing their interdependence with preceding and subsequent sections cannot be overemphasized. Careful studies are needed to ensure that adequate production will be forthcoming in the area which the plant is intended to serve, and that this output will be in line with market demand and will have access to wholesale and retail channels which will assure effective distribution. Large specialized meat and poultry processing plants set up near Rome with the support of development funds both failed on this latter account. Because of such risks, it is unwise to concentrate credits on a few large projects.

Where co-operative organizations of producers or consumers offer solid prospects of raising the level of competition in bargaining, financing, transport, storing and processing, governments generally assist in their financing. A useful criterion in the allocation of credits may be

that applied in Japan, where money is advanced to co-operatives which have shown ability to increase their own capital and still have a genuine need for more.

The development of credit and warehousing systems adapted to farmers' needs also merits priority. Farmers and merchants obtain a receipt for produce stored in the warehouse, which is security for a loan from a bank. Credit can usually be obtained for up to 90 percent of the market value of the goods in store. This enables the owner to wait for a favorable opportunity to sell; and the higher over-all return should give producers an incentive to grow more. For this system to be effective there must be warehouses within convenient reach of most producers. This requires a lot of capital both for storage construction and for disbursement as loans. Usually such a program can only be carried out with government assistance.

Where the development of export markets is vitally important, governments have sometimes set up special export credit systems to relieve merchants of some of their risk and credit burdens. Otherwise, the long waiting period for payment, uncertainty concerning the creditworthiness of buyers, and heavy initial transport costs involved in exports to distant markets, tend to deter many potential shippers.

Removal of obstacles to efficient operation of marketing enterprises

One of the most productive ways of marketing improvement is to help individual enterprises organize themselves to the best advantage in terms of location, scale of operation, plant layout, financing and management. Their search for profits has led them to making important contributions to agricultural and consumer welfare, specifically, and also to the general economic development of the environment around them.

An example is the local dealer who acquires a truck on a hire purchase contract, buys farmers' produce where prices are low and takes it to where they are high. By so doing he provides the service of arbitrage which prevents such price differences from attaining still wider extremes. By buying when and where demand is low in relation to the supply of goods and reselling when and where demand is relatively high, he is helping to stabilize the market. The widest seasonal variations in

millet prices in Nigeria, for example, occur in precisely those areas where there are no substantial grain traders in business. Generally, the more skilled their management, the greater their capital resources; the stronger their initiative, the more they are capable of finding the best possible outlets for farmers' produce and of placing before consumers the food required.

One of the basic considerations in seeking possibilities to improve marketing through private enterprise is to provide a favorable climate for the operation of efficient business, be it domestic or foreign. The maintenance of peace, law and order, and of political and monetary stability are fundamental conditions for rapid marketing development. Little long-term planning, investment or training of personnel is likely where there is severe inflation and periodic currency devaluation. The prime concern of businessmen is then to protect themselves against such tendencies and exploit them, rather than initiate long-term developments.

Usefulness of international enterprises

The presence of international trading enterprises can be very helpful in underdeveloped countries. They are able to recruit skilled technicians and administrators from the places where they are most plentiful, and can draw their capital from the lowest cost sources. Thus the handling of commodities exported to the U.S.A. and western Europe, such as tea, sugar, jute and rubber, has been relatively well organized, because of the direct influence of buyers at the destination points. They are acutely conscious of competitive quality standards and supply costs, and ensure that local managers are trained accordingly. Similarly, international firms exporting grains from countries such as Argentina and Burma could mobilize working capital in areas where it was freely available and shift it around the world according to differing seasonal requirements. If capital contributions by such firms are discouraged, the demand for short-term credit of this type must compete in such countries with many other calls on limited national resources.

Developing countries must be prepared, therefore, to recognize economic realities and not impose such restrictions on returns from investment and enterprise as to discourage the application of new capital and initiative. The Argentine railways fell into disrepair because the com-

pany was not allowed to charge enough to cover the maintenance. As a result, the service was poor and agricultural marketing costs were raised through wastage and delay. Extensive public warehousing construction programs are likely to materialize slowly if warehouse operators' fees are fixed too low for the service required.

When marketing enterprises try to introduce new forms of organization and new methods, they usually expect to achieve savings in costs, or improve their services so that they can charge more for them, or both. The value of a country's agricultural output can be increased substantially by the provision of standardization, sorting, packing or other services sought by consumers; and by timely adjustments to changes in demand under the direction of progressive marketing enterprises. If a country is to make the most of such services from private enterprises, then it cannot afford to put obstacles in their way. Nevertheless, in many countries, the entry of commercial firms into particular fields of business is impeded by confusing regulations, and discrimination in the granting of licenses, import and export allocations, etc.

Modification of traditional systems

Traditional systems of marketing which governments want to improve are often being maintained mainly because of official protection. This contradiction appears in the granting of local monopolies or other special privileges to fairs, street markets and municipal services. Regulations in many Italian cities that food coming in must be sold wholesale in the municipal market make it impossible for retailers to arrange for deliveries direct from the farm and so cut their costs. The porterage and other charges incurred to get fruit and vegetables into and out of the Rome market are alone more than the cost of transport from a production area 300 kilometers away. In a number of Latin-American cities, the sale of meat from efficient slaughterhouses outside their boundaries is blocked, in order to protect established small-scale butchers and the income the municipality derives from its own slaughtering facilities. Even in Europe, a compensation tax is often levied on such meat. This inevitably raises the price to the consumer.

In many countries there is not so much a need to eliminate middlemen, as is often claimed, but for changes in their operations. More specialized middlemen may be needed to provide active competition,

and to give producers and buyers a wider choice of alternative methods or channels of marketing.

Termination of an obligation to pass livestock through a municipal slaughterhouse in Santiago, Chile, and the development of a refrigerated meat supply channel from the south, led to the replacement of a number of traditional intermediaries by a smaller number of specialized meat buyers for larger retail outlets. Similarly, more professional speculation is sometimes needed to limit price fluctuation over time and price differentials between places, but it is often impeded by policies and procedures adopted without sufficient thought for the consequences. Thus, trading on the Milan futures market, in products other than wheat, maize and rice, has been impeded by a legal obligation to pay a turnover tax on each transaction. Furthermore, all " future " contracts in excess of 45 days were impracticable under the existing stamp duty regulations. The result was that the market could not be used for " hedging " purposes, nor was the contract period long enough to encourage speculative arbitrage.

A study of fruit and vegetable marketing in the Mediterranean and Persian Gulf areas showed a general tendency on the part of many traders to favor transactions that could be completed in a short term and with high allowances for trading risks. It also showed that governments could help overcome this by relieving traders of the possibility that administrative procedures, such as customs inspection, quarantine programs and unexpected export or import embargoes and licensing requirements, would hold up a consignment already arranged or en route. Such risks are especially grave when an expensive organization has been prepared to supply a particular market and the product is perishable. At present, many municipalities or other local bodies have powers to restrict trade movements. Time-consuming formalities are frequently required in obtaining permits and customs clearances. All such delays and obstacles handicap traders in developing efficient methods; they add to the cost of the transaction and to the spread between the producer and the consumers' price.

Limitation of monopolies and strengthening of competition

Competition between marketing enterprises induces them to seek better and cheaper methods and to be economical in their use of equip-

ment. Where competition is sharp, producers and consumers benefit through the competitive cutting of margins and firms are under constant pressure to minimize their costs. New firms can enter the business at will. Therefore, established concerns must keep up-to-date with the latest technical development which might offer savings.

In practice, the degree of competition in marketing varies considerably, both between and within countries, and between different lines of marketing. Lack of competition in a particular trade may have an important bearing on its efficiency and costs. Marketing agencies see the same inducements to build up monopolies as other business enterprises. A firm with a monopoly of particular marketing services in a certain area will tend to take higher margins and offer less satisfactory services than if up against competition.

Local trading monopolies

Monopolistic action on the part of closely knit groups is common. In country livestock markets, wholesalers may regularly buy most of the stock offered. In these circumstances, they may be tempted to form a " ring " and make some tacit agreement on the maximum prices they will pay, or on the lots for which they will bid. In this way, each may obtain a more comfortable margin than would be possible if the number of buyers was greater and competition sharper. These " rings " are most common where the buyers are homogeneous in character, and it is impracticable for the sellers to move their stock to other more competitive outlets.

Local buyer monopolies based on poor transport facilities, narrow markets and meager supplies of capital are characteristic of agricultural areas in underdeveloped countries. They partially explain the high margins and interest charges often taken by merchant moneylenders in the Near East and Asia. Even in markets as large as that of Teheran, the commission agent group holds together and makes it difficult even for the most determined farmer to circumvent them. It is their practice to advance money, in some cases without interest, to producers and country buyers who are then morally obliged to sell through their creditor. The customary commission on fruit and vegetables is 10 percent of the price obtained, but the seller has little opportunity to check the commission agent's sales records.

Disgusted with the malpractices of the commission agents, a large citrus grower from the province of Kerman decided to take two truck loads of oranges to Teheran and sell them himself. For three days he went from one market to another trying to sell his fruit to the many retailers in Teheran, but nobody would buy it. Fear of reprisals by the commission agents, who have a tradition not to deal with a client of one of their fellow agents, was too strong. To sell his fruit, the grower had to go back to his old commission agent and undertake not to attempt to go round him again. The grower in question was not in debt to any of the agents in Teheran.

The type of marketing intermediary that can justly be termed superfluous is the one who is kept in business only by custom and group pressure on the less regular users of a market. The reform of some Indian markets led to the disappearance of certain types of " brokers " without impeding the course of transactions. There is a livestock railhead in Nigeria where local influence permits an agent to levy a charge of over $4.00 per animal for assistance in loading which many of the cattle owners do not need. Those who try to dispense with the services of established handlers and porters often run the risk that their goods will be damaged or delayed. In the Naples and Palermo fruit and vegetable markets, maintenance of *Mafia* group monopolies has even led to murder. To be relieved of such burdens it is essential that market users be free to develop alternative trade channels and be afforded reasonable security in doing so.

Among the most enduring monopolies are those which develop where a strategic market is controlled by a trade association or municipal authority which is dominated by representatives of the existing traders. The old fruit and vegetable market at Hong Kong was much criticized for malpractices and price spreads between producer-wholesaler and wholesaler-retailer of 100 percent or more. Ownership of the wholesalers' stalls had been passed down within families for generations and it was practically impossible for a newcomer to acquire space in the market.

Public monopolies

Particular care is advocated in the allocation of monopoly powers even to public bodies. While such an organization as the Kenya Meat

Commission, for example, has initiated many programs bringing undoubted benefits, it should always be considered whether these same tasks could not also be carried out without exclusive marketing privileges. A monopoly magnifies the risk that staff, who at the beginning are very efficient, might relax their efforts, allow their costs to rise or force on customers a service which they do not want. All this leads to high marketing costs and higher consumer prices, thus limiting consumption. The risk of investment being wasted is also much greater under a monopoly than in a free economy. Investments in slaughterhouses operated by municipalities or other public bodies demonstrate this very clearly, not only in Africa but also in western Europe.

If a monopoly is limited in area of coverage then the attitude of potential users of its services situated on the fringe of its territory is a useful criterion of its performance. If they seek its services, then this is a favorable indication. Similarly, if a monopoly of service is granted for a limited time, authorization of its renewal should be subject to whether most users wish to maintain their contracts.

Unfortunately, many of the extortions attributed to the monopolistic local merchant in the less developed countries recur when the employees of government buying agencies and marketing boards find themselves in a parallel position *vis-à-vis* the farmer or trader. Constant vigilance is needed to ensure that marketing efficiency is not subordinated to nepotism and the use of local power for personal profit.

Discriminatory licensing and administrative practices

In some countries, import or export licenses have been given to individuals whose main interest was in selling them to other legitimate firms. The operations of some state trading departments and inspection authorities have been prejudiced by the corrupt practices of their staffs. Rather than submit to the unlawful exactions of the inspectors of one African marketing board, who alone had the power to allocate an official grade, farmers preferred to accept the lower price for ungraded lots.

Generally, the most effective remedy for exploitation of various sorts is to stimulate greater competition, and make it feasible for those subject to such practices to use alternative outlets. Control legislation is often difficult to enforce. The prohibition of private moneylending only reduces the number of sources of credit, to the disadvantage of the

producers and consumers it is intended to protect. It is more logical to eliminate legal or institutional bases for monopolies as far as is feasible, and if a monopoly is independent of these factors, to foster the establishment of competing channels under independent ownership.

The restriction of sales to specific markets or to a limited number of licensed firms and the establishment of zonal monopolies should be avoided. A preference for orderly marketing sometimes leads administrators to set up compulsory market structures which may not be in the best interest of either the farmers or the consumers they seek to help. By depriving farmers of alternative outlets, such measures remove the main check on administrative weaknesses in less developed countries, namely, freedom to take business elsewhere. It is also a mistake to allow group pressure to exclude, from any area of food and agricultural marketing, enterprises which are run by persons of different national origin, religious belief or social background, or of different capital structure.

In Nigeria, the most effective check on the concentration of wholesale trading in the hands of the United Africa Company is said to have been the development of a rival enterprise of Lebanese ownership. The initiative of the Chinese in southeast Asia, Jews in Europe and Indians in east Africa has been responsible for outstanding developments in marketing to the direct benefit of the general body of producers and consumers. The presence of heterogeneous elements in a marketing structure is a good antidote to group complacency and the limitation of competition by private agreements. Similarly, competition in food retailing has been encouraged in Italy by the abandonment of policies designed to prevent the establishment of chains buying centrally and retailing through a number of different shops.

Creation of alternative marketing channels

Such methods of stimulating competition may be supplemented by more direct action on the part of farmers, consumers and governments. They can acquire or set up marketing enterprises to operate under their own direction, and thus be sure that there are effective alternative marketing channels. Trading enterprises may also be set up in strategic marketing channels by marketing boards, municipalities or other public bodies to serve as a measure of the efficiency of enterprises in other

ownership. By widely publicizing the prices they offer and charge, they can keep those of the private traders in line. An example is the meat marketing enterprise set up by the Turkish state-owned Et ve Balik organization. It built a slaughtering plant at Ankara and engaged buying agents in various parts of the country to send in supplies by rail. It retailed meat in units of 1 kilogram, priced and labeled according to cut and grade. Eliminating the delays of cutting and packaging for individual customers, its four retail outlets handled 6 to 7 tons of meat per day. The price charged was said to be 20 percent below that previously prevailing among private butchers, yet still covered operating costs.

3. WHO SHOULD TAKE THE INITIATIVE

In the previous chapter, the scope for improvement in the marketing of agricultural products was indicated together with some methods which might be of use. The need for better practices or marketing organization may be evident, but the introduction of new procedures, construction of new facilities, organization of new enterprises, implementation of joint action, and the suppression of undesirable practices require that someone takes the initiative. This initiative can come from marketing enterprises themselves, from farmers, from consumers, or from local and central governments. It may also be supplemented by international aid.

Marketing enterprises

Many of the most practical improvements in marketing spring from the enterprise of private traders and corporate firms seeking a profit. To earn their livelihood, individuals and the companies they direct offer to the community services on which they set an attractive price. Among the most essential of such services are those needed to bring agricultural products from the farm to the consumer. In most countries where opportunities are not unnecessarily limited by customs or administrative restrictions, there is generally no lack of people seeking to engage in marketing, to assemble the output of small farms, to carry produce to consumer markets, and to break large consignments into convenient lots. Competition induces them to seek cheaper and more effective handling methods and to build more economical plants, and, where it is strong, ensures that producers and consumers benefit through the competitive cutting of prices.

FIGURE 17. Villagers waiting to have their maize ground at a mill set up by a neighbor on savings accumulated while working for a mining company. Bakwanga, Congo.

INDIVIDUAL EFFORT

There are many potential organizers and operators of efficient marketing enterprises, even in areas where they have not demonstrated their ability to a great extent as yet. Thus African entrepreneurs have shown themselves capable of developing very considerable trading enterprises when given access to capital, as during a period of rapidly rising prices, and opportunities to purchase and operate equipment at reasonable cost (Figure 17).

"In Northern Nigeria there is a Hausa trader operating on a large scale. He had spent his childhood in the Gold Coast around the turn of the century. As a young man he became a cattle trader, and succeeded in accumulating some savings. He eventually returned to Nigeria, and was there when the railway was extended to Northern Nigeria. He remembered the part played by the railway in the spread of the cocoa industry in the Gold Coast, and he foresaw that railway development in Nigeria would revolutionize the prospects of the groundnut

industry. He set up as a groundnut buyer and built up an organization of sub-buyers throughout the area. He provided them with cotton piece-goods, both as a means to purchase groundnuts and as an inducement for their cultivation. He has contributed greatly to the spread of the industry. His activities and success are examples of the result of superior perception of economic opportunity." (Bauer, P. T., *Economic analysis and policy in under-developed countries*, Durham, N. C., Duke University Press, 1957.)

Contributions by marketing enterprises to the promotion of greater production and better supplying of consumers' needs are beyond number. The main condition seems to be an adequate incentive, and that their activities are not impeded unnecessarily by administrative and institutional restrictions. Sometimes, lack of initial capital and the poverty of the environment constitute a stimulus rather than an obstacle. Somalis are prominent in providing marketing services in much of east Africa, yet their country is among the poorest in natural resources. Many Somali traders earned the original capital needed to acquire a truck and goods for their agricultural transactions by serving as stokers on ships calling at Aden. Such an entrepreneur, by contributing initiative, puts labor that is underemployed to productive work and so adds to the wealth of the country.

A characteristic illustration of how the enterprise of one man can raise the economy of a whole area was observed on a field tour during an FAO marketing training course in Chad. A Mr. Chanteloup set up a dairy at Massakory, some 200 kilometers north of Fort Lamy. It provided a regular market for milk from the surrounding district which formerly had no commercial outlet. Every day the women of the herdsmen came to the dairy, were paid cash for a few liters of milk and thus obtained a regular income (Figure 18). They had formerly been living on a subsistence level, except for seasonal sales of livestock. At the dairy the milk was separated. The cream was converted into butter, canned and sold to consumers in Fort Lamy who would otherwise have had to import it. The buttermilk went to pigs, which eventually provided bacon.

Co-ordinated effort

There is great scope for integrated production and marketing projects to expand output of the type needed and present it to consumers at the

FIGURE 18. *a*) Women bringing milk in gourds to the Chanteloup dairy.

time and in the form they want it. The initiative in developing and operating projects of this nature has generally come from wholesale buyer-distributors and wholesale processors. It is characteristic of food marketing problems in countries undergoing accelerated economic development that they arise simultaneously all along the line from the planning of production to meet market demand, through the various transport, wholesaling and processing phases, to retail distribution. These phases are so closely interrelated, and the difficulty of breaking through the interdependence often so great, that success in establishing improvements in any one of the various marketing phases frequently depends on corresponding improvements taking place in others.

Traders desirous of maintaining a regular supply of fruit to consumers in Singapore, for example, have had to depend very greatly on imports. Many types of attractive locally produced fruits are available, but only at certain seasons and in varying quantity and quality. However, steady supplies of oranges and apples, for example, can be obtain-

FIGURE 18. - *b*) Simple canning equipment used for butter at Massakory, Chad.

ed from international sources all the year round. As a result these latter achieve a dominating position in local trade.

To make full use of local fruit production potentials, specific varieties maturing at different seasons or suitable for storage would need to be developed, planted systematically and protected against pests. Of the 157,000 acres under fruit production in Malaya in 1954, only 19,000 were planted to a single variety and the bulk were mixed cultures.

In addition to a planting outlay of, say, $2,000 per acre, tree-fruit growers must have the capital to wait five years or more until their trees begin to yield. Suitable grading, storage, transport, and possibly processing facilities, are then needed. Finally, arrangements must be made with retailers for the attractive display of the fruit, and effective advertising undertaken.

To establish an exotic fruit, such as the mango or mango juice, on American or European markets would require a consistent campaign over a considerable period of time. To justify this outlay and obtain advantageous distribution contracts, the quantity offered would need to be substantial. All of these development aspects must be carried on in co-ordination with each other if any are to bring in a proper return. Usually, the initiative of a wholesale processing enterprise which makes the contracts with producers on the one hand, and distributors on the other – contracts which facilitate access to working capital – is the key to the project.

Specialization of functions and equipment

Attention to the operational efficiency of individual marketing enterprises is most important. The concentration of firms into larger units or the combination of several functions under a single management may afford opportunities for greater specialization of labor, management and other services involving human skill. A fruit and vegetable wholesaler may operate much more efficiently if he has enough business to maintain a driver and a motor vehicle, a salesman to contact potential customers, secretaries and bookkeepers to take care of correspondence and accounts, and can leave himself free to concentrate on the over-all running of the business. A manager who must spend a substantial part of his time handling crates, cleaning the premises and repairing equipment is handicapped in satisfying clients and developing new business.

Savings in time and the better use of unskilled labor may be achieved by further subdivision of tasks, by the introduction of modern techniques of work simplification and by the careful planning of each operation in relation to the equipment and materials involved. An expert in time and motion studies was able to show celery packers how they could reduce the number of knife strokes needed to clean each stock

FIGURE 19. Meat retailers in an African public market.

from between three and four to an average of two. There are retail outlets where each sale requires the personal supervision of the owner, where each price, weight or quality decision must be referred to him by assistants who can be entrusted with no more responsible functions than packaging and delivery. The use of standard consumer credit and pricing policies can do much to solve this problem and make it possible for a manager to supervise a much larger volume of business. The self-service store, with all prices marked in advance, is the logical extension of this trend.

Many marketing enterprises in the less developed countries have yet to appreciate the advantages which lie in the use of brand names and advertising techniques. The total cost of newspaper or poster advertising is the same whether the advertiser be small or large, but the more produce handled for the same amount of advertising the lower is the unit cost of that advertising. The advantages of advertising are less significant in countries where trading relations are largely personal and

means of communication are poor. However, the wide reach of the radio may lead to a great expansion in the use of advertising in areas where printed material receives little attention. When it is fully appreciated, great changes in marketing procedure and organization can be expected. Savings from large-scale retailing may then be attainable which have not hitherto been significant.

Lack of access to refrigeration has hampered the adoption of more economic food retailing practices in many tropical countries. Without means of storage from one day to the next, fresh meat retailers, for example, tend to limit their operations to a scale where they are sure that their stock will not exceed their customers' demands (Figure 19). The risk that the unsold part will spoil deters them from acquiring large stocks so as to offer a wider range of produce and attract new customers.

In hot climates where there is no refrigeration, consumer buying is crowded into a small part of the day. This may also lead to the establishment of a larger number of retail outlets than if sales could be made throughout the day. However, the installation of refrigerated stores and equipment depends, in less developed countries especially, on a sharp reduction in price and access to cheap credit for purchase. This may be undertaken by the wholesale supplier. A new meat wholesaling marketing enterprise in Costa Rica has installed refrigerated display cabinets in retail outlets to ensure continuity of sales and protect its goods from deterioration before sale to the final consumer, as is done on a wide scale in more developed countries (Figure 20).

Training and planning

Much more could probably be done by marketing enterprises to educate their own staff and organize technical training in marketing for all who want it. Some small traders are so occupied with immediate tasks that they have no time to inform themselves about longer-range market factors, and consequently they cannot plan far ahead. The smaller market intermediary, like the small farmer, cannot afford experiments to test new methods of operation; in trying out a new technique he might well lose business he could not afford to sacrifice. Such firms are ill-equipped to carry out cost analyses involving a detailed account of their operations. Similarly they may be reluctant to engage the serv-

FIGURE 20. An inexpensive portable refrigerated display case.

ices of a professional business adviser or engineer who might recommend improvements urgently needed to keep them in touch with the most modern techniques.

The operation of technical training programs would be a very appropriate contribution for trade associations and other bodies representative of marketing interests. Marketing enterprises might also take a more active part in sponsoring such programs in collaboration with national and international authorities concerned with improvement programs. The offer of a leading supermarket firm in Bogotá to provide practical training facilities as part of the program of the new Latin-American Marketing Institute was much appreciated.

Farmers

The scope for initiative by farmers who want to improve the marketing of their crops and livestock is considerable. They can try to facilitate the task of existing marketing enterprises by planning production to meet their needs and preparing their produce more closely

to consumer tastes; they can try to eliminate one or more marketing intermediaries and sell directly to retailer or consumer themselves, either singly or in groups; they can also form associations, committees or boards, to bargain for satisfactory sales terms with processors and wholesalers, or to launch promotional campaigns directed at consumers; they can seek authority from governments to set up marketing boards with powers to require that produce be marketed in specific ways.

The first area of initiative merits priority in importance because the others are likely to bring better results if the first has received due attention. It may be illustrated from the poultry industry. Hatching and feeding schedules can be adjusted to stimulate production at the season when eggs are scarce, and to ensure a regular supply to the buyer who needs this to satisfy his customers. A breed laying eggs of the preferred color can be selected, the eggs can be handled carefully, collected twice daily, kept cool while awaiting collection; cocks can be excluded from flocks laying eggs for consumption to eliminate deterioration of eggs due to embryo development. The exclusion of dirt from grain, avoidance of rough handling of livestock, the use only of clean water on vegetables, are only a few examples of the scope for action by farmers to make marketing easier.

Direct sale to consumers

In many population centers farmers still have an opportunity to sell direct to consumers and obtain the full consumer price for their produce. The quantity marketed may be small and the time spent long, but the individual grower has control over the whole marketing process and is independent of intermediary services. Some of the advantages and limitations of direct sales to consumers were discussed in the opening chapter. Producers can also sell to consumers at the farm, if they can induce them to come there. This is easiest where there is an adequate potential clientele living within a short distance or with means of transport at their disposal. Farmers situated near roads carrying a considerable volume of traffic can take advantage of this to sell direct from roadside stands. Such stands are a common sight along the road into Manila, for example. Fruit, vegetables, poultry and eggs, milk and flowers are sold. The profitability of such stands depends on the ability of the operator to offer a continuous supply of products that are in constant demand by consumer-patrons, and to attract their custom.

Co-operative marketing

Co-operation by producers to market their own produce is generally stimulated by the feeling that established traders are either providing an inadequate service or they are charging too much for it. By working together to assemble, pack, store and sell, producers can set up an alternative marketing agency to those already available and thus raise the level of competition. If they are able to operate at a lower cost, then the gain in marketing efficiency is direct. However, even if they only give an equal service at about the same cost, the contribution to market efficiency may still be great because they provide competition which may prevent the private traders from charging more.

In considering the organization of marketing co-operatives, it is useful to recall some of the circumstances which favor successful operation. They offer particular advantages to farmers in specialized producing areas distant from their main markets. Group transport and marketing offer substantial savings in costs. Careful timing of shipments, selection of destination and supervision of sales is essential, since there is little possibility of taking goods home again if the price is unsatisfactory and distance may prevent farmers handling sales personally.

Combined large-scale selling is most advantageous where production is concentrated in a compact geographic area. The success of co-operative fruit packing, for example, often depends on easy transport from members' orchards to a central warehouse or packing plant. Groups which are dependent on one or a few crops for their total income are often well advised to support a co-operative. They would be highly vulnerable to a sudden drop in prices and would benefit from a marketing organization on which they could depend to protect their interests. The economic, cultural or racial homogeneity of the potential membership also affect the success of co-operatives. It was found that the co-operatives of Chinese farmers selling on the Hong-Kong fruit and vegetable market had to coincide with clan groupings, even though larger units could have marketed more economically.

Co-operatives can put their members in a stronger marketing position if they have cold storage and processing facilities. If they can extend the period of marketing and reduce the proportion of sales during the peak flow when prices are lowest, the benefit may be considerable. Capital must be available, however, both for the plant and equipment

needed and for advance payments on produce awaiting sale. Co-operatives must also handle sufficient produce of uniform character to be able to offer an attractive service to the retailer and other outlets.

The co-operation of a group of vegetable growers who concentrate on the production of a special root for the Tokyo market, some 70 kilometers away, has been strikingly successful. They maintain a sales agent at the wholesale market who bargains on their behalf. The secretary of the co-operative is informed of the prospective market situation by telephone early each morning. A wire service between his office and members' homes enables him to advise on prices, and the supplies that should be sent to the market each morning. The members of this co-operative have prospered greatly, meanwhile contributing a regular supply of vegetables to consumers. The members of Thavajburi Paddy Marketing Society, Roi Et Province, Thailand, earned a patronage refund of $5.00 per ton of paddy delivered during 1958 over and above the normal market price. There were 114 such societies in Thailand with 67,000 members at the end of 1957.

The farmers with small marketable surpluses, little holding and bargaining power and limited knowledge of business techniques, so common in the less developed countries, are at a disadvantage when selling to professional buyers. Marketing co-operatively should generally help them obtain better prices, especially if they can afford to employ a good business man as manager. However, the organization of effective marketing co-operatives to serve very small producers marketing mixed crops in irregular quantities is very difficult. Many growers are too poor, illiterate, too set in their ways, too ignorant of others and too suspicious or timid to make any new move. Many are also bound to particular merchant buyers by personal and social ties, and by prior indebtedness. In such circumstances the initiative will have to come from outside, most probably through governments.

It may be noted that the co-operatives which handle the bulk of the rice marketed by small farmers in Japan undertake only limited responsibilities as receivers and storage agents for a monopoly government food agency. They face little risk; they are protected by a licensing system which makes them the only official buyer in the area they serve; and the grain purchased is graded by government inspectors.

The formation of producers' associations to bargain for their members as a group is important in negotiating contracts with processing enter-

prises or other large wholesale buyers. By bargaining as a group, farmers can exert more control over the pricing of their produce. By joining together, they can offset monopolistic power in the hands of buyers and obtain much better terms than if they sold independently.

An example of how producers associating to augment their bargaining power can bring about a favorable modification in marketing structure is the organization of the Shizuoka Central Wholesale Market in Japan. From 1945, this market has been operated by a company based on equal representation of producer co-operatives and merchants. Individual producers and co-operatives send fruit, vegetables, flowers, and eggs for sale there. The market staff arrange sale by auction to local retailers for a commission of 8 percent, replacing completely individual negotiations with wholesalers or other sales agents. The market paid shareholders a dividend of 12 percent. Thus, in addition to being assured that their produce was sold in open competition, the producers participating in the company received a substantial rebate on the commission charge.

Advertising and sales promotion

Producers of relatively specialized crops and livestock products often find their market limited by slow consumer acceptance and unwillingness to buy the product in a particular form. Agriculturists dependent for their livelihood on the sale of some established product may find that consumer interest is shifting away from it. Demand can often be maintained, however, and new markets developed, if some effort is put into advertising and sales promotion. Such campaigns can be undertaken by an individual farmer or marketing enterprise, but would be costly. Usually this is worthwhile only if a particular name or brand is featured. Other producers and traders then benefit indirectly. It is more equitable, and the campaign can generally be conducted more effectively, if all the producers likely to benefit contribute to its cost. Farmers and food distributors in the U.S.A. often contribute from 1 or 3 percent of the value of their sales to group consumer promotion. Specialized staff can then be engaged to plan and carry out the work.

To direct such a program for eggs in one Egyptian city, the establishment of a committee of leading producers and egg merchants and rep-

resentatives of the ministries of agriculture and supply was recommended. It was proposed that this committee:

(*a*) Advertise in newspapers and magazines during periods of seasonal abundance, emphasizing the food value of eggs and their contribution to health, and their relatively low price.

(*b*) Prepare and distribute in retail shops, restaurants and schools, posters and consumer leaflets showing egg dishes designed to appeal to local popular tastes and stressing their nutritional and health-giving features.

(*c*) Arrange for colored slides demonstrating the serving of new egg dishes to be shown in cinemas, or on television when available.

(*d*) Encourage hospitals, schools, government institutions, hotels and restaurants to include more eggs in their menus.

All such programs are best conducted in close association with retail distributors to ensure that the product is available in quantity when advertised, given a prominent position in the shop, and presented with eye-catching signs or packages (Figure 21).

Large sums of money need not be spent in order to carry out effective consumer education and promotion programs. It is enough to bring together the essential facts about the food involved and to provide simple, yet effective, directions for its preparation and use. Newspapers, magazines, radio and other communication media are usually willing and anxious to present stories, arrange lectures, and otherwise publicize reliable information about nutritious foods with a wide appeal. However, educational campaigns to stimulate increased consumption of particular foods need considerable patience. They have a cumulative effect only when continued over a period of years. Children, in particular, may learn perhaps to eat more eggs in school and then continue the habit through life.

Producer marketing boards

Membership in a marketing or bargaining co-operative or a market promotion group is voluntary; it cannot be expected that all growers of the product concerned will join. This is especially unlikely if the

FIGURE 21. A poster used in a campaign to promote the consumption of fish, particularly dried fish, which is a cheap source of protein and of which low income groups in Latin America might take more advantage.

programs envisaged involve substantial financial contributions, or acceptance of group control over individual marketing decisions. To bring in producers who would otherwise stay outside a group marketing program, farmers in many countries have obtained powers of compulsion by public legislation. By means of a government statute they are empowered to set up a marketing board which can issue marketing orders or regulations enforceable in the ordinary courts. This authority is usually limited to producers and handlers of a specified commodity, or situated in a specified area.

Marketing boards with such power can greatly strengthen producers' bargaining positions *vis-à-vis* traders and consumers. If market separation is feasible, they can often raise farmers' average returns by pooling receipts from domestic and export sales, from sales for different

uses, e.g., citrus as fresh fruit or juice, and from sales at different seasons. They can also undertake sales promotion and research, and the establishment of grading and inspection systems.

The relation of producer marketing board programs to world hunger problems depends very much on how they are operated. Those which limit the supply of food products offered to the market, as is the practice under some of the California-type marketing orders, go directly against consumers' immediate interests. In effect, they amount to exploitation by producer groups, legally endowed with monopoly powers, though subject, of course, to government supervision. The extenuating argument in North America is that most consumers there are well off and this is a means of enabling agricultural producers to attain comparable incomes.

Boards which keep up prices in the home market by diverting part of their farmers' output into export markets as occurs, for example, with meat in Kenya and Rhodesia, also raise prices to domestic consumers. As a result, some of these consumers are unable to buy as much meat as they would have done otherwise; consumers in the importing countries, however, benefit from the additional supply put at their disposal.

Marketing board operations which, by averaging returns from low prices charged to poor consumers and high prices charged to those better off, sell more food in total and induce farmers to produce more, could help to solve hunger problems in specific areas. This approach depends, however, on some means of keeping the low and higher income markets separate.

The west African boards, which control the marketing of export products such as cocoa and palm oil, have been fairly successful in stabilizing prices to home producers. They have worked through existing trade channels for the most part, including in their contracts with wholesale buyers requirements that producers be paid a published minimum price. The Nigerian Regional Marketing Board also stands ready to buy from them directly at loading ports. The farmer is thus able to go to the nearest agent's buying station, or to the port, and obtain at least the published price instead of having to accept whatever independent local buyers may offer. At the same time, the buying agents

are still free to offer prices above the minimum, if they can achieve savings through more efficient transport or larger turnover.

A criticism of some of these boards is that part of the stabilization funds, accumulated from the difference between the prices they receive in foreign markets and those paid to farmers, has been spent on projects of general interest and without the agreement of the producers concerned. This money is no longer available to cushion producer prices against the effects of a sharp drop in export returns.

Many of the factors bearing on the prospects of co-operative marketing ventures apply also to marketing board programs. They are most effective where physical control can be exercised over the produce at one point in the marketing chain (a port, a specific wholesale market, a slaughterhouse, cold store, etc.). A key factor, for example, in the operations of the British Columbia fruit and vegetable marketing board is the need for all major truck shipments to pass along the Frazer River road to the main city markets. Loads can be held up at this point until supplies already on the market have been moved satisfactorily. In the absence of such a convenient control point, as in much domestic marketing, the application of marketing board programs is often impractical.

Considerable care is needed to ensure that marketing boards are not given powers that might be harmful to the more efficient producers. for instance; or that would be used to resist long-term trends which it would be in the general interest to follow. In most countries, therefore, proposed marketing board or control schemes usually require approval by the minister of agriculture, the national parliament and a two-thirds majority vote of the producers. Adequate time should be allowed for discussion and objections. Such procedural safeguards may not, however, be applicable in many of the less developed agricultural areas where marketing boards might be considered helpful. Here, inevitably, the major responsibility for initiation and supervision would fall on the central government, which warrants special caution. Experience in some of the areas where marketing boards have been operating suggests, furthermore, that the establishment of administrative machinery with extensive powers to accumulate funds and control detailed trading operations places many temptations in the way, both of influential political factions, and of members of the staff who run it.

Consumers

Though they may depend upon the marketing system for their food supplies, consumers are rarely quite as interested in its efficiency as producers. Purchases of food are only a part of consumers' living expenditure. These purchases are also made in very small lots, or are split over a number of different products. Many consumers, therefore, though they may grumble at high prices or poor quality or bad service, may not apply much initiative to bringing about improvements.

A further consideration is that individual consumers generally constitute so small a part of the market served by a particular channel that they have little effective power to change it. Usually all they can do is show their disapproval by taking their trade elsewhere – assuming there is a convenient alternative. Other possible lines of action by consumers include: exerting political pressure on the government to use its powers to modify marketing practices, reduce prices or prevent their rising; organizing information services to help consumers buy more advantageously through existing channels; and setting up their own wholesaling and retailing enterprises to operate directly in the consumers' interests.

Government controls in consumers' interests

Political pressure upon governments to ensure that basic foods are available at prices in line with current wage levels is probably the consumer's strongest weapon. It has been exercised all through history and in all parts of the world. Revolutions have been provoked by the high cost of bread. Concern over the cost of food in the larger population centers is pre-eminent in motivating many government programs for marketing controls and reform.

Thus to ensure an adequate supply of rice for the army, the police, the vital industries, and for sales to the ordinary public in times of shortage, the government of Indonesia recently applied the following set of controls: all imports, exports and inter-island shipments of rice required government authorization, restriction of the establishment of new mills and the operations of existing hullers and polishers; mills were required to work for the government, which purchased rice for

them; limited storage of rice and paddy to minimize speculation; movements of paddy were subject to license to facilitate direct purchases and distribution by a government food agency set up for the purpose.

Direct intervention of this type may be necessary to defend both producers and consumers against the effects of emergency pressures on the working of a marketing system. Whereas organizations reflecting producer or trading interests might act to protect their members against excessively low prices, they could not be trusted to apply equal energy to protecting consumers against the effects of physical shortages. Though drastic measures may help to satisfy public opinion that action is being taken, their long-run effect on production and marketing is often harmful. Close administrative regulation puts too many impediments in the way of efficient use of resources and adaptation to consumers' requirements. However, as a supplement to free marketing channels, a government stabilization agency can be established to hold reserve stocks, add to them when prices are low and put them on the market when and where prices are high. This has been found very useful in many countries of the Near East, southeast Asia and Latin America.

Governments are often induced to fix maximum retail prices for foodstuffs in the interests of consumers. How far these prices are effective depends on the seriousness with which they are taken by the community. Such action may help to delay claims for higher wages to match increases in the cost of living and so assist policies to contain inflation. However, inflationary forces usually stem from the over-all condition of an economy which cannot be corrected by control over certain marketing channels alone. If the demand is greater than the supply at the price fixed, then the supply will disappear and rationing will be essential for equitable distribution. Such policies, continued for long in the face of rising costs, may reduce marketing efficiency and discourage production. The particular method of controlling beef prices used in Chile blocked for a number of years any modification of the costly marketing structure to meet consumer demand. Producer prices were kept so low that eventually substantial imports were needed.

The extent to which prices to consumers can be held down by subsidies depends on the financial resources available. Limited quantities of bread and food grains can be made available at low prices through special outlets such as the " fair price shops " in India, or for a limited

time early in the morning. The pilot " food stamp " program recently inaugurated in the U.S.A. (along the same lines as were used in a similar program in the late 1930s) operates on much the same principle, except that the recipients are sold a special scrip (which can be freely used in participating grocery shops) at a discount related to their income level. The difference between the price charged and that needed to cover normal costs and margins must then be made up from public funds. Sometimes the wholesale suppliers and producers can be obliged to absorb it, as in Iran for a number of years, where they were required to supply specified quantities of wheat at a low price as a condition of being able to sell the remainder of their supplies on a free market and so make up their deficits. All such two-price schemes depend, however, on the practicability of preventing all consumers from buying the food intended for the very poor. Generally, this would involve the registration of names and presentation of ration cards.

Establishment of information services

Consumers could well take more initiative to ensure the provision of information likely to be helpful to them in food buying. The use of retail labels that provide a reliable guide to relative quality could be one requirement. Processors and retailers prefer such high-sounding terms as prime, fancy, choice and select, and may apply them to various levels of quality. Unless the consumer is extremely well versed in the practices of a particular trade, the effect is to obscure rather than indicate relative quality. A, B, C, or 1, 2, 3, or equivalent descriptive terminology makes the difference clearer.

The value to consumers of a reliable market news service has already been indicated. Publication of objective analyses of the quality of various foods offered to consumers in relation to their price is another very helpful service. Reports, such as those of the Consumers' Union in the United States and *Which* in the United Kingdom, are especially valuable in guiding consumer purchases of processed and brand foods. This work is financed by subscribers to the reports. There is an international association of consumers' unions with its headquarters at The

Hague. Assistance to consumers in less developed countries in organizing comparable services adapted to their requirements would be a valuable avenue of international aid.

Consumer marketing enterprises

The establishment of food marketing enterprises by consumers' co-operatives is the most direct method by which consumers can influence marketing. The growth of the consumer co-operative movement in the United Kingdom, which handles about 20 percent of the food trade there, is the outstanding example of success in this direction. Members of such co-operatives generally obtain an annual rebate on their purchases of about 5 percent, while the existence of a retail channel under their ownership maintains competitive pressure for efficiency.

The predominance in the less developed countries of small independent food retailers taking high margins on low turnovers suggests that well-run consumer co-operatives could achieve considerable savings. By introducing standard sales and pricing methods, in place of individual bargaining, and by employing specialized buyers and managers, they should be able to operate on a larger scale and at lower cost. However, consumer co-operatives have not made much impact in less developed countries so far. In Thailand, the first retail co-operative was established in 1937; by the end of 1957 there were 195 with 126,000 members.

One difficulty is to purchase economically at the wholesale level. This has been comparatively easy in the United Kingdom because much of the food supply is imported and arrives in the country in large lots for distribution from ports. Nevertheless, the retail co-operatives in the United Kingdom found it necessary to set up their own wholesale supply agency. A small one has also been established in Thailand; by 1957 it served 102 retail members' co-operatives and had a turnover of $440,000.

Municipal authorities

Local authorities have always shouldered considerable responsibility for the satisfactory marketing of foodstuffs within their administrative boundaries. This reflects the vulnerable position of the urban consumer

who cannot fall back on land of his own for subsistence when marketed food is scarce. The nature and degree of responsibility undertaken is determined very much by what is done by the central government. Where the central government cannot be depended upon for assistance locally, because of poor communications, differences of interest and lack of means, then a considerable field of initiative is left to local authorities.

Licensing procedures

Maintenance of sanitation in wholesale and retail marketing establishments, and protection of consumers against unwholesome or adulterated food, and against deception in quantity and quality are often undertaken on a municipal basis. It was the practice of the city fathers of Siena to have the tails removed from all fish remaining for sale at the end of each day – to help consumers distinguish which were fresh. To enforce the standards desired, municipalities usually require that food handling premises be licensed, and appoint inspectors.

Initially, measures to raise standards of hygiene often meet resistance on the grounds that they raise the cost of marketing. Though sanitary and commercial interests sometimes seem to conflict, the relatively low operating costs found in some countries maintaining strict standards of hygiene show that mutually satisfactory solutions can usually be found. Sometimes there is a tendency for traders influential in municipal politics to use such measures to protect their established interests and keep out competition which might lead to a reduction in marketing margins. For this reason it should be established that licenses to operate marketing enterprises are to be issued freely on request; they can be suspended or withdrawn if the holder fails to maintain minimum requirements after due warning.

Municipalities often take a special interest in the marketing of meat because of its importance to consumers, and the risk to their health if it is diseased or unwholesome. This problem is most acute when killing takes place in numerous small and isolated slaughtering plants. It is the difficulty of inspecting isolated lots that has led to the compulsory channeling of meat supplies through municipal slaughterhouses in many areas. An additional consideration in much of Africa and Asia

is that private butchers do not possess the capital needed to put up suitable buildings, provide water, etc.

Unfortunately, powers intended to protect consumers are sometimes used to keep out meat that could be brought in from well-equipped slaughtering plants in hygienic refrigerated vehicles. It is clear, in such cases, that the main purpose is to protect municipal revenues and those of the butchers who use the municipal slaughterhouse, rather than the consumers' welfare. With modern transport, the old concept of the city supply zone becomes obsolete. Frequently, a much more efficient pattern of marketing would develop if such powers were removed and the necessary inspection services organized on a regional or national basis.

Provision and supervision of public markets

In order to facilitate the supplying of food to their citizens, municipalities frequently establish and pave market areas, provide water, drainage and light, as well as cleaning and police services. They may also set up livestock markets and refrigerated stores. Some of the defects in existing wholesale and retail markets have already been discussed. Enlightened municipal supervision can do much to solve them. Appropriate buildings and access routes, impartial auctioneers, and regular up-to-date information on supplies, sales and prices, can be provided.

At the new market in Lyons, prices at other centers are announced continuously by loudspeaker. Evidence of substantially higher prices in Paris or London is enough for some lots to be directed there. The municipality might, as in Rome, maintain a retail outlet of its own in each of the main markets, in order that the prices at which produce could be offered retail, with due allowance for costs, should be indicated clearly (Figure 22). It intended also that these enterprises take a lead in introducing methods of prepacking, etc., that would be helpful in reducing deterioration costs.

It is important that market transactions be negotiated openly and that manipulation of supplies and prices to the disadvantage of producers and consumers, be minimized. For these reasons, some city authorities have made it compulsory that all wholesale transactions in food should take place in the public wholesale market. This blocks direct move-

FIGURE 22. Municipal retail meat stall with prices indicated. Rome

ment of supplies from producer to retailer and may enable entrenched groups of market workers to exact heavy charges. Pressure from established traders and other interested groups should not be allowed to influence municipal authorities against acceptance of changes in marketing structure in response to new conditions. The growth of supermarket chains, for example, which buy produce from country packing houses on a specification basis, can benefit consumers directly by introducing new competition leading to reduced distributive margins.

Concern for public welfare sometimes induces municipal authorities to fix maximum retail prices for foods. This may be valuable in an emergency situation to quell fears of shortages and consequent inflation of prices, but it weakens the incentive to producers and traders to correct the situation by the most effective method, namely, by channeling in more supplies. For this reason it is best not maintained for long. Furthermore, in fixing maximum prices, it is difficult to make adequate

provision for differences in quality. To obtain the cuts of meat that they like for example, consumers may have to pay unauthorized premiums which are retained in the supply channel, instead of being passed back as incentive payments to producers. The result is generally to the consumers' disadvantage, namely, higher prices and poorer service.

Governments

The pace of improvement in marketing reflects to a considerable extent the degree of responsibility accepted by governments. In the underdeveloped countries, government initiative in mobilizing the capital, administrative personnel and technical knowledge needed for progress, is almost essential. Many of the areas calling for direct government action – improvement of transport, storage and information services, channeling of investment funds toward marketing improvement projects and steps to limit monopolies and strengthen competition – have already been indicated.

In most countries it is also left to governments to take the initiative in establishing extension, training, research and inspection services for marketing. Circumstances may also make it necessary for them to take a lead in stabilizing supplies and prices of basic food products, maintaining buffer stocks, developing special aid programs for needy groups and putting apparent food " surpluses " to good use.

The development of a potentially important marketing channel often depends on the co-operation of more than one country; then intergovernmental action is needed. Finally, to advise on all the activities related to marketing and to co-ordinate the various services, a government will almost certainly need to maintain a qualified staff in a specialized marketing department.

Training and extension

Many policy makers, advisers, administrators, and the directing personnel of business enterprises, co-operatives and public institutions concerned in the marketing of farm products would be much better equipped if they had a thorough training in marketing principles and practice. Similarly, it cannot be expected that farmers and traders will

FIGURE 23. The Indian Government has initiated a practical storage training program at Hapur where grain is handled both in sacks and in bulk.

adopt improved methods of packing, storage, transport and distribution without prior explanation and practical demonstration. They also need advice on the different marketing channels through which goods can be sold, the relative advantages of various markets, the sources of credit and the terms on which it can be obtained, the practical prospects for forming a successful co-operative and many other facets of marketing improvement. At present, specialized training in marketing at the farm, trade and administrative levels, is provided in only a few countries (Figure 23). Marketing extension as a consistent public service is still confined largely to North America.

Need for trained marketing personnel

Efficient marketing technicians and managers are especially scarce. Many countries view with disfavor the continued employment of foreigners. Special measures have been taken in Indonesia and elsewhere

to " dealienize " wholesale and retail trades which have been run in the past very largely by people of different national origin. As a result, critical marketing responsibilities are being undertaken in the Near East, southeast Asia and Africa by men who have to start with little training or experience.

At the same time, the demand for marketing managers is expanding as new enterprises, private, co-operative and government, are being set up under agricultural development, land reform and settlement programs. At the FAO Marketing Center at Bogotá, which was held from April to June 1961, advantage was taken of the presence of agricultural marketing specialists from many Latin-American countries to appraise the number of trained marketing men needed. It was estimated that, over the following ten years, Colombia alone would require some 900 trained marketing foremen (head meatcutters, grain fumigators, packing-house, warehouse and refrigerated store foremen, etc.); 700 with specialized technical training who could be responsible for the efficient operation of marketing installations and services; and almost 200 at the directing and advisory level to run enterprises, advise on policy, etc. Extrapolation to Latin-American countries on the basis of their agricultural output showed their total requirements in the above three categories to be 9,500, 7,000 and 2,000 respectively.

One of the major conclusions of this center, and of other FAO meetings (New Delhi, May 1959, and Cairo, January 1960) of agricultural marketing specialists from countries in east Asia and the Near East, was that adequate facilities for practical training in the various aspects of marketing organization and in methods of handling food and agricultural products, especially perishables, were sadly lacking in every country represented.

Training facilities

At present it is difficult to find teaching establishments which offer a suitable combination of training courses for marketing, even in the most advanced countries. Business administration courses are adapted mainly to nonagricultural requirements; courses in agricultural economics and co-operatives are often divorced from marketing management; instruction in the technical handling and quality appraisal of

agricultural commodities is rarely available in conjunction with them; practical experience of the physical and business operations of marketing is left to the individual to obtain elsewhere if he is able and so inclined.

At the Bogotá center, therefore, it was decided that a Latin-American Marketing Institute should be established to offer the following program of instruction. A course of from six weeks to three months at the practical level will be given in countries where efficient installations for the marketing of specific commodities are available for demonstration. This course is intended to train head meatcutters, warehouse foremen, grain fumigators, packing-house foremen, etc.

A course of at least one year and of a predominantly practical character will be offered for training " marketing technicians. " After taking refresher courses in mathematics, economic geography, business administration and accounting, entrants would be given intensive training in economics, statistics, marketing principles and practice, the marketing of specific specialized agricultural commodities and the operation of marketing services, transport, storage, purchasing, selling, etc.

The basic curriculum envisaged for marketing directors and advisers will cover two years or more. Candidates would be expected to have a suitable university degree and take refresher courses in applied mathematics, statistics, economics, agriculture and English. The regular course would be composed of: advanced economics and marketing; development planning and programing; agricultural marketing research; organization and management of private, co-operative and public agricultural marketing enterprises; international trade and sales methods. On completion of this basic training, potential marketing directors and advisers, as well as technicians, would be required to gain practical experience in one or more of the other Latin-American countries before receiving their diplomas. Thus, practical work in the purchase, sale, storage and quality control of agricultural products would be an obligatory part of the training.

Institutes providing such a combination of training, located in and specifically adapted to the needs of the less developed countries and capable of handling large numbers of trainees, are needed most urgently. Governments and educational foundations are urged to review the adequacy of the facilities available for training in marketing and make arrangements for improvements as soon as feasible.

It is not necessary that the number of trained personnel should correspond exactly with the total of jobs immediately in sight. Education is a relatively economical investment and man power is characteristically the most ample resource of most underdeveloped areas. It would be a great step toward raising the level of professional performance if there should be more applicants with the necessary technical training than jobs available. Competition for posts should then lead to higher standards of work input and integrity.

Extension programs

Governments are also recommended to expand general agricultural extension programs so that they cover more adequately the needs of agricultural marketing. At present extension workers in the less developed countries devote practically all their time to advising on production. An economical approach would be to recruit a limited number of marketing extension specialists who could prepare and transmit advisory material on marketing to local extension officers serving the whole agricultural field. In some cases, direct contact with the farmer may be established through community development leaders or village representatives. The organization of training courses by districts, where the marketing specialists explain the scope and nature of marketing improvements to field extension men, would help to ensure full understanding and effective dissemination at the local level. A series of district courses, featuring practical demonstrations of improved packing and sorting methods, etc., have been organized for local extension workers in Iran with the aid of an FAO marketing adviser and have proved very successful.

In circumstances where there is illiteracy among farmers, agricultural traders and their employees, visual and audiovisual instruction methods are essential. Radio programs and phonograph records can be used to supplement newspaper articles and pamphlets; all should use popular language. Appeals to co-operatives, market committees and other bodies in touch with agricultural communities to help with marketing extension programs can effectively mobilize valuable local influence. In India it is hoped to develop a link between village workers in community project areas and district marketing advisory staff.

One of the first steps is to promote a constructive approach to marketing on the part of all the agencies concerned and to dispel the attitude that other enterprises in the marketing sequence can look after themselves. Without effective distributing channels farmers would revert to subsistence agriculture; without a steady output from the producer, the traders would have no business. Marketing extension can play a vital part in explaining to agricultural producers and handlers what to do and how and when to do it, thus helping to reduce overall costs and the need for wide marketing margins.

Research

Research falls into two broad categories: market research and marketing research.

Market research consists of inquiries to open up new markets for specific products, or to expand existing ones, through better knowledge of consumer demand and sales conditions.

Marketing research is broader and more profound. It implies research into the efficiency of the marketing system as a whole, of the methods employed and of the organizations involved.

Market research is generally undertaken by private marketing enterprises, co-operatives or group marketing organizations, to help them sell more of the products they handle and obtain better prices. It can also be undertaken by governments on behalf of farmers and traders combined, when the successful sale of their output is an important national interest, or as a guide to future development policy.

The objective of most marketing research is to improve the marketing services available to their users, e. g., producers and consumers. Data and conclusions presented as a result of such research may be helpful to individual marketing enterprises; and by raising their efficiency will also raise that of the marketing system as a whole. Such research may also indicate changes in marketing procedure which would cut down the profits of particular firms in the interests of overall efficiency. Because of this possibility, marketing research unlikely to further the interests of particular enterprises is usually dependent on government grants, or on independent institutions devoted to the pursuit of knowledge and general welfare objectives.

Market research is essential as a basis for decisions on production developments, investments in processing and handling equipment and the direction of sales efforts. It reduces the risks of disappointment and loss and greatly increases the chances of profitable trade relationships. It usually covers the following points:

(*a*) sanitary regulations and those for the minimum quality standard, as well as packaging, inspection and other current regulations to be taken into account in deciding on the form in which a product should be sold;

(*b*) customs and licensing requirements, quotas and other public levies, or restrictions which affect the cost, volume or timing of sales in particular markets;

(*c*) the prices paid for different qualities and forms of a product during different seasons;

(*d*) the suitability of alternative methods of sale and type of sales agencies, and their respective cost;

(*e*) prospective consumer demand and ways in which it could be increased.

Inquiry along these lines is designed to answer such critical questions as: what is the size of the market? What is its character in terms of public requirements and consumer tastes? Is it consistent through the year, or are there great advantages in concentrating sales during certain seasons? Can sales be expected to increase? Will the increase in returns cover transport, stocks in storage, credits to distributors and the cost of advertising? In many countries produce of varying type and quality is sold without regard for consumers' habits and preferences and their willingness to pay for them. Investigations to determine the nature of these preferences, and the adoption of processing, packaging and distribution procedures adapted to them, are likely to increase consumer satisfaction and bring higher returns to the original producers.

There is great scope for marketing research in the less developed countries, in many of which even basic information is lacking. The Government of India has undertaken a series of broad marketing surveys on a commodity basis to assemble the facts on which recommendations

for improvements can be based. Only too often policies are determined without appropriate background information. In this type of research it is important that the main issues be specified at the outset; collection of data should then be designed to clarify them, appraise the effectiveness of possible improvements, and assess the resources needed.

At the 1959 FAO New Delhi meeting, marketing specialists from countries in Asia and the Far East stressed the need for research designed to appraise the effectiveness of existing marketing institutions and to guide government policies along lines that would maximize attainment of their goals.

City market supply channels and the handling of perishable foodstuffs in large urban centers are other important fields for study. Systematic analyses should also precede decisions to finance new market facilities or to promote new forms of market organization. The preparation of plans for marketing facilities in producing areas, at concentration points and in distribution centers; determination of the best methods and equipment for transport, storage and packing; and methods of wholesaling and retailing, all call for careful research if due account is to be taken of varying local conditions.

In most of the less developed countries, the major barrier to effective marketing research is the lack of trained personnel with local knowledge. To correct this situation it is essential that a sufficient number of promising students specialize in marketing at the advanced university level and that they be attracted to such work when their training is complete.

Stabilization and buffer stocks

A tendency toward price instability is inherent in the marketing of many basic agricultural products owing to variability in yield, high seasonal concentration of output and the relatively low price elasticity of consumer demand for them.

The seasonal range in prices is particularly wide in less developed countries, because so many producers are forced to sell immediately after harvest, or even before, in order to meet essential living expenses and repay loans. In Cambodia, for instance, prices of paddy in January and February, just after the harvest, are said to be barely half

those prevailing in July and August. The immediate postharvest price of potatoes in Colombia is often no more than one third of that realized later in the season. Where commodity markets are narrow, the range in prices is often magnified by speculative trading. In some countries of the Near East, merchants with access to capital have bought up wheat at low prices early in the season, exported part of it, so running down domestic supplies, with the result that later in the year imports were needed. At this stage, they could sell their own stocks at prices causing hardship to consumers and bringing no benefit to the producers.

Sharp variations in the prices of important agricultural commodities also occur between one marketing season and another. Such interseasonal fluctuations may be cyclical, i.e., following a fairly regular and perhaps partly predictable pattern under the stimulus of past profitability to producers in the case of commercial livestock industries, or of natural factors, as perhaps with olive and palm products. They may also result from inadequate or excessive rainfall during the growing season, crop pests and diseases, or political events bearing on production and trade that cannot be foreseen. The wheat harvest in Syria, for example, yielded 1,350,000 tons in 1957 and only 553,000 tons in 1960.

Price instability may also be increased by the natural reaction to price changes of subsistence farmers whose family food needs are sometimes inadequately met. When prices are low, they may have to sell more of their output in order to satisfy their minimum needs for cash and so intensify the downward pressure on prices. On the other hand, when prices are high, some may be able to afford to sell less, and consume more themselves, thus increasing the shortage on urban markets and forcing prices still higher.

Access to better market information and improvements in the normal marketing system should enable some producers to adjust their plans in such a way as to allow for predictable cycles and help to even out prices to consumers. Furthermore, low farm prices are often associated with high output, thus tending to stabilize total returns; while profitable sales at price peaks sometimes compensate for poor returns during low price periods. Nevertheless, there are cogent grounds for measures to moderate the disturbing effect of violent fluctuations.

As long as most of the price risks are borne by the farmers, it is not

reasonable to expect them to adopt better production methods which usually require a larger initial outlay of cash and effort; some protection against unduly low prices seems essential, at least at a level sufficient to cover their out-of-pocket expenses. Even if farm prices were effectively stabilized at levels corresponding to the average prices consumers would be willing to pay (including allowance for distribution costs in the more efficient channels) farmers in most less developed countries would gain considerably; they would be much more confident that efforts to expand production would be rewarded. Consumers also must be protected against shortages of basic foods and high retail prices which, for lower income groups, could result in famine. Government fixing of price ceilings alone often results in the disappearance of supplies, discouragement to producers and, where inadequate differentials are allowed, dampens incentives to maintain quality.

There is a clear need for marketing institutions and procedures that protect farmers against very low prices, safeguard supplies to the consumers, and also allow commercial movements of produce to proceed on a smooth and continuous basis. To achieve this end, many governments have undertaken direct procurement and buffer stock operations, designed to remove supplies of basic food grains from the market in periods of low prices and release them later when prices rise, coupled with regulation of imports and exports.

In many Near Eastern countries, for example, special government financed and controlled stabilization and storage agencies have been set up to acquire stocks of wheat by purchasing after harvest, and holding them ready for release later in the season to bring down retail prices and to supply needy areas should a shortage occur. They also have power to limit exports and to import supplies as needed to cover potential deficits and compensate for exports in excess of the domestic surplus.

Usually, the establishment of such an agency and publication of the price at which it will buy is enough to induce other market channels to offer comparable terms; consequently it does not have to take up a large part of the total crop marketed. This is important in the less developed countries where the funds available for direct purchases are often limited. The buying points must, however, be sufficiently widely distributed to be within reach of most farmers and suitable storage must be available. Price guarantees are likely to affect production only to

the extent that the producer actually receives them, a condition which is not always fulfilled. In Ceylon, where such a system is being developed, growers have had to sell to private traders at less than the official prices for lack of easily accessible government buying stations. Yet the maintenance of an extensive network, which may not necessarily have a high turnover, inevitably involves high costs. It has also proved difficult in some countries to ensure that official buyers and graders apply appropriate differentials for quality in the face of strong local pressures and temptations to abuse their position.

Most of the grain agencies in the Near East manage their stocks as a means of stabilizing prices both within and between seasons. The extent of the deficit during recent bad harvest years is usually taken as an indication of the additional supplies that might be needed to guarantee future consumption requirements. Account has also to be taken of the need to balance supplies that might be withheld from the market by speculative hoarding. If transport within a country may be difficult, supply reserves are best maintained at sites easily accessible to the districts most susceptible to shortages.

Price stabilization for export commodities presents a much more difficult problem than stabilization of domestic markets. International commodity price stabilization agreements are difficult to negotiate and have not been uniformly successful. A country with a major share of the world market for a particular commodity may attempt to stabilize international price levels by regulating marketed supplies unilaterally, as Brazil has done for coffee. The policies followed by the government of the U.S.A. in marketing its stocks of wheat and cotton have been influential in maintaining fairly stable world price levels for years at a time. However, such action requires considerable financial resources and even then much of the benefit is likely to go to competitors.

National efforts, as a rule, have been directed mainly to cushioning the effects of world price fluctuations on the domestic market by the use of equalization funds, accumulated by setting aside part of the export proceeds in times of high prices in order to augment returns to growers when prices are low; and by means of variable export taxes and exchange rates. The use of equalization funds for cocoa, groundnuts and other export crops by west African marketing boards was mentioned earlier. The Government of India imposed a high export tax on tea when its price on world markets was high and reduced it

as prices declined. The use of exchange rates to modify export prices has been much used in Latin America, mainly by delaying favorable adjustments where producers of a particular commodity were thought to be adequately rewarded.

Aid to needy groups and the use of "surpluses"

The food and agricultural problem most intransigent to solution by better marketing is the existence simultaneously of food stocks which cannot find a profitable market, and of would-be consumers who do not have the money to buy them. It is easy to say, "Why not let the price of these food stocks fall to a level which even the poorest can meet ?," but this ignores the serious repercussion on the producers that could be expected. Their incomes would be cut sharply; their natural reaction would be to stop production if they could find anything else to do, with the end result that the over-all food supply would be reduced. In addition, the fall in their incomes and spending power would have drastic economic and political effects in the countries in which they live.

It is true that the lowest prices at which some of the "surplus" foods are allowed on to the market are determined by arbitrary support policies and many of the more efficient farmers could well produce for less. However, maintenance of this arbitrary level in world markets keeps many farmers in production in countries other than those where there is a surplus, and this also has to be taken into account.

The problem, therefore, is how to get this superabundant food to the people who need it without bringing down the general price level. It is sometimes said that the agencies responsible for this task wait hopefully for crop failures. Certainly, short harvests in Mainland China led to a substantial drawing upon wheat stocks in Canada and Australia in 1961. Some stocks of cereals and storable protein foods, such as milk powder, must be kept on hand in most countries to meet possible emergencies, especially in those with large populations and subject to sharp variations in domestic output. The governments of India and Pakistan need reserve stocks of millions of tons. There is little likelihood that releases for distribution at such times would affect markets unfavorably; usually local prices rise only too fast.

Problems of free food distribution

In times of stress, limited quantities of food can be issued free of charge, or at reduced prices, to people who are aged, physically handicapped, or are maintaining many young children. This distribution would have to be subsidized from public revenues. Unfortunately, the resources of the countries where the largest number of people need help are far too meager to carry the cost of large-scale distributions. In Ceylon and the United Arab Republic, for example, a free meal is provided daily for children at a number of schools, and for expectant and nursing mothers. In addition to raising their nutritional level, it helps attract children to school. However, to give a daily meal to all the children between the ages of 5 and 14 in the less developed countries of Africa, Asia and Latin America, consisting of only 60 grams of wheat and 25 grams of dried skim milk or its equivalent would cost a very large sum indeed. One estimate is $3,000 million.

Religious and lay charitable organizations and appeals to the public help to provide food without payment where it is urgently needed. The donations of food and money to buy food for the South Kasai refugees in the Congo early in 1961 were examples of such efforts. Some of the more prosperous countries holding large surpluses might be willing to give them away on a substantial scale in order to improve the diets of needy people. Experience has shown, however, that such action often is not welcome. Except under emergency conditions, it is thought that any massive free distribution of food would be bound to upset existing incentives to domestic producers. Chronic dependence on such aid, once it is started, is also often feared.

Food as a means of investment

Schemes to use food as a means of investment are more constructive, because they envisage a lasting contribution to economic development. This is a new concept based on a shift from "surplus disposal" to "utilization of surplus food for development." The principle is as follows: expenditure on a development program causes a general rise in income because additional local raw materials are bought and overall economic activity is stimulated. Higher income increases consumer

demand, and in countries where many people are unable to eat all that they would like, it would be reflected especially in the demand for food. Because of the relatively slow response of agricultural producers to new demand, domestic supplies may not increase to meet it, and scarce foreign exchange resources would, in many cases, limit extra food imports. The result would be a sharp rise in food prices. This could lead to inflationary pressures which could jeopardize the whole development program. Thus the injection of food as a form of capital for development purposes can serve not only to improve diets in the short run but also to assist in providing a desirable longer-run solution to the basic problems which cause poor diets and low incomes.

Since the total of international as well as national capital now being provided for the development of less advanced parts of the world is limited, provision of surplus food can usefully be associated with it as a supplementary form of investment. This can proceed simultaneously both on commercial terms and under the various aid programs set up by the contributing countries. The concept of food as a valuable form of aid, permitting more efficient use of capital aid, has until recently received only limited acceptance although the idea of using surpluses along these lines is being considered under bilateral programs. Meanwhile, the adoption by the United Nations General Assembly in 1960 of the resolution on the provision of food surpluses to food-deficient peoples, has initiated a new multilateral approach, and FAO and the United Nations are now embarking on an experimental "World Food Program."

Food/capital needs relationship

The practical working relationship between food demand and capital investment can be illustrated in terms of a project to build 1,000 miles of district roads in India. Using local methods and materials this would occupy about 110,000 workers, mainly unskilled or semiskilled, for a year; it would cost the equivalent of nearly $20 million. Almost 70 percent of this sum would be spent on labor and another 10 percent on expenses directly influencing food consumption. It is estimated that about one third of both these portions of the expenditure (i.e., a little over one quarter of the total investment) would reappear as increased consumer demand and be spent on additional food if this

were available at the same prices as before initiation of the project. If the roads were constructed entirely with foreign aid, about one fourth of it therefore, not only could, but should, be given in the form of food aid in order to avoid inflationary pressure on existing supplies.

There are many other categories of development work where much the same food/capital needs ratio would apply – building projects using labor-intensive methods, supplementary irrigation and drainage work, bunding, terracing, land clearance, tree planting and soil conservation. There are also many other countries besides India where the effect on the demand for food would be immediate or only a little delayed. Countries undertaking large projects to reform land holding and cultivation systems may need food aid during their initial phases for a different reason. The food output of the agricultural areas affected may fall sharply during the period of reorganization and re-equipment. Former laborers given responsibility for a land holding of their own need time and will make mistakes before they learn to run it efficiently. Even when their output has reached or exceeded the former level, it may be offset by increased consumption by the farmers' families, so that deliveries to town markets remain low. In anticipation of difficulties of this type, countries with barely adequate current food supplies may be deterred from introducing reforms likely to bring benefits in the future.

There are doubtless many other situations where the provision of food can usefully constitute a substantial part of a development aid program. In the installation of hydroelectric plants, steel works, fertilizer factories, etc., however, the proportion of labor to other costs is relatively low. Over the whole range of economic aid to the less developed countries, it is estimated that the appropriate food proportion might be about one fifth or one sixth. Since large amounts of such aid are essential if living standards in many parts of the world are to be increased, there is considerable scope for the use of food in this way.

Food aid distribution procedures

The organization of large scale food aid on these lines will clearly call for considerable skill, knowledge and diplomacy. It must not reduce incentives to maximum food production within the countries concerned; nor should it upset international markets.

Countries like Burma and Thailand depend on the export of basic food commodities for much of their foreign exchange earnings. The earnings of the less developed countries from exports are about eight times larger than the international aid they receive; even minor fluctuations in the prices of these exports have a major impact on their foreign exchange resources.

Normally, development food aid would be channeled into the general supply of the recipient country, following the same marketing procedures as commercial imports. Arrivals in retail shops timed to match expected increases in demand would minimize effects on prevailing local prices. Avoidance of delay, and distribution through several competing channels would also be a safeguard against speculative purchases by traders and consumers for resale. Consumers normally would have to pay for their purchases as for home-grown foods and the proceeds of these sales, less the distribution costs, would accrue to the home government. They could then be treated as additional proceeds from taxation, or savings for investment, and be used to finance further development projects.

Intergovernment action to promote trade

Much could be said about the contribution which governments could make by collaborating to facilitate the movement of food from producers in one country to consumers in another. The economic advantages of letting production expand where it is cheapest and allowing a free flow to consumers are well known. Superimposed, however, is a pattern of national security considerations and pressures to protect domestic producers by supporting prices at specific levels and limiting competing imports, a pattern induced in many cases by the need to conserve foreign exchange and by political preferences for trade with particular countries. To analyze the extent to which such restrictions block economically advantageous movements of food from producers to consumers is too ambitious for this text. Governments can, however, be urged to minimize the obstacles.

There is much scope for initiative without prejudicing other commitments. Intergovernment agreement is frequently needed to facilitate the marketing of perishable agricultural produce beyond national

frontiers. A good example of this was the prewar marketing in northern Europe of fruit from Bulgaria, where conditions for growing fruit and vegetables are favorable. Traditionally, grapes were used mainly for wine making, but a small percentage went for fresh consumption. The only important market for fresh grapes was Sofia, with about 350,000 inhabitants. The rest of the country was self-sufficient in grapes and other fruits and vegetables. Thus, the vine growers had a very limited outlet for fresh grapes and were compelled to convert them into wine, which hardly repaid the cost.

Successful export of fruit and vegetables to countries in central and northern Europe was thought impossible because of the distances to be covered. However, experiments were made with ships on the Danube and rail transport to Austrian, Czechoslovakian and German markets. Eventually, by the joint efforts of six countries, a through train service from Bulgaria to London in six days, including the boat ferry, was organized. The quantity exported grew annually from a few railcars to 11,500 of 6 or 7 tons each in less than ten years.

The possibilities offered by this international transport service also provided a stimulus to the tomato industry. Within three years, a new type of tomato suited to northern markets was developed and exports rose to 50,000 tons in six years. The development of this fruit and vegetable export trade brought prosperity to many formerly poor Bulgarian farmers who had nowhere to sell their produce; while, in northern Europe, people who could not previously afford grapes and tomatoes were able to include them in their diet. There is much scope for the organization of comparable marketing channels in northeast Africa, the Near East and Persian Gulf areas and elsewhere. Because such channels would cross national boundaries, they depend on intergovernment collaboration.

Initiating, co-ordinating and inspection services

Every country with a significant agriculture needs in its administrative system a central unit devoted to the initiation and maintenance of improvements and to the supervision of public marketing services. Yet frequently this is lacking in spite of its paramount importance to

farmers and to consumers alike. There may be several official agencies with responsibilities impinging on agricultural marketing, including agriculture, trade and finance ministries, state banks and price stabilization or storage agencies. However, most are either not equipped to promote a comprehensive improvement program or else have other prior interests and give it only secondary attention.

One of the main functions of a marketing development unit is to stimulate action by other bodies. Its officers need time to investigate problems, prepare action programs, canvass influential persons and organizations, address meetings, negotiate agreements and mobilize government pressure where necessary. If municipal authorities, for example, are responsible for weights and measures in local markets, it can act through them. Arrangements can be made with a university laboratory to undertake quality control analyses. Standard grade and packing specifications could be established in collaboration with growers' and traders' representatives.

Similarly, in conjunction with the groups affected, legislation could be initiated to protect the public and individual farmers and traders against fraud and unfair or dangerous practices, e.g., by maintaining quality standards and regulating commission agents' procedures, the handling of food, livestock, and of goods in storage, warehousing and credit arrangements, use of labels and sales terminology, and advertising claims. Regulations on such matters should be given a provisional trial and suitable inspectors recruited and trained before implementation is attempted.

A marketing improvement unit could also help promote a storage construction program, advise on type, size and location of units, assist in preparing requests for investment loans, stimulate the use of such facilities by farmers and traders and secure the implementation of credit and price stabilization programs. It should also assist in the establishment of new marketing and processing facilities, either with private or public capital, and the adaptation of transport arrangements to agricultural marketing needs. In co-operation with existing price-recording services it might set up a regular agricultural market news service. Queries will inevitably arise calling for detailed study and technical analysis. At this stage the need for a trained research staff will be felt. The follow-

ing diagram indicates a possible division of responsibility between branches:

CHIEF, MARKETING DEPARTMENT

Marketing development	Market news	Grades and standards	Marketing facilities
Studies of marketing organization and methods; introduction of general improvement programs	Collection and dissemination of market information through the most suitable media	Studies of requirements, formulation and introduction of specifications; inspection and enforcement	Investigation of technical requirements and costs; preparation of plans; advice to operators.

The success of such an undertaking will depend upon the quality of the staff and also the ability of the director to convince influential bodies of the importance of efficient marketing. He should therefore be a man of initiative and determination and should also possess the necessary understanding of economics and the practical experience to insure that the proposals suggested are sound and well adapted to the needs of the country.

While such a marketing department may advise on price stabilization and the holding of reserve stocks, on the establishment of marketing facilities under public ownership and on the development of alternative marketing channels, it would be well advised not to undertake the direct purchase of goods and management of physical facilities. In this way it remains free to offer objective advice on the need for such action on the part of the government, and how it should be carried out. It is also preferable that a marketing department be free of any overriding commitment to promote the development of specific market structures, e.g., private, co-operative, municipal or state. Its position as adviser on their relative suitability for a particular marketing situation then remains unprejudiced. Marketing units working along these lines in India and Chile, for example, have achieved good results. Others are now being set up in Near Eastern countries.

Where the government has already undertaken various regulatory and intervention programs relating to marketing, lack of co-ordination

between the departments concerned and direction by unqualified personnel often cause difficulties. In one country where FAO was asked to advise, nine different ministries were handling aspects of agricultural marketing. If the marketing of agricultural products is to proceed on satisfactory lines, co-ordination of the various government bodies concerned is essential. This is often best achieved by the consolidation of all such activities in one major government department staffed with personnel trained specifically for marketing work.

International aid

The Food and Agriculture Organization of the United Nations stands ready to help its member countries introduce marketing improvement programs. Initially it concentrated mainly on expanding agricultural production, but since 1955 increasingly greater resources have been devoted to marketing work. At present, about 30 expert marketing advisers are in the field; marketing training centers and technical meetings are held in different regions; a series of practical marketing guides has been published and an annotated bibliography of marketing publications is maintained. Fellowships are awarded for advanced training in marketing (Figure 24). The marketing of all agricultural, fishery and forest products – grain, fruit, vegetables, livestock and meat, milk and dairy products, poultry and eggs, fish, sugar, coffee, cocoa, spices, oilseeds, fibers, hides and skins, timber, etc. – is included in the FAO program. It also covers all the various phases and aspects of marketing from preparation for sale on the farm to delivery to the consumer.

Aspects receiving special attention in many countries include:

(*a*) adaptation of farm programing, cultivation, harvesting, handling and sorting practices to changing marketing requirements;

(*b*) packing and transport methods, notably for perishables such as animal products, fruit and vegetables, etc.;

(*c*) planning of new storage and processing facilities; advice on their size, type, location and business operation, as well as the development of appropriate credit and purchasing arrangements;

FIGURE 24. Officers of TOPRAK, the Turkish state grain marketing organization, discuss the quality of wheat preferred by Italian *pasta* manufacturers during a tour organized under the FAO fellowship scheme.

(*d*) improvement of marketing channels to avoid wastage and excessive margins; and the development of new marketing organizations, e.g., wholesale auctions, co-operatives and other group marketing arrangements, integrated wholesaling and retailing enterprises, processor contract systems and government sponsored competing agencies;

(*e*) standardization, grading and presentation methods to simplify handling and sales transactions, to make produce more attractive to wholesale buyers and consumers and to enable the pricing system to guide output more efficiently;

(*f*) pricing methods, including the correction of excessive fluctuations and elimination of monopoly practices; advice on price regulation and stabilization programs and their co-ordination with other marketing improvement objectives;

(*g*) distribution methods and organization; planning of wholesale and retail markets and of means to reduce retail distribution costs; encouragement of large-scale low-margin retailing, e.g., through supermarkets, chain stores, consumers' co-operatives, etc.;

(*h*) development of government marketing services; building up of marketing departments and of standardization, grading and quality control, export inspection, research, outlook, training and extension services; establishment of price stabilization and other state intervention services.

One of the most effective forms of aid is to provide a practical marketing specialist who can work for some time in a particular country, analyze its problems, make specific recommendations for improvement and help the government carry them out. FAO has marketing experts working in Latin America, Africa and in the Near and Far East. In the United Arab Republic, for example, a FAO specialist with experience of European markets has helped the government set up efficient cleaning, sorting, wrapping and packing stations for citrus and other fruits, trained the workers and organized an export program (Figure 25).

FIGURE 25. An FAO marketing adviser (center) discussing the grading, wrapping and packing of tomatoes with local associates. United Arab Republic.

Another specialist has set up an export quality control service in Libya and designed equipment to facilitate the handling, pitting and packing of dates. He is also working toward the establishment of a citrus processing enterprise to produce acceptable juices from fruit which might otherwise not find a market.

As a result of the work of FAO marketing experts in Chile, there have been important changes in wheat pricing procedures leading to substantial increases in production; and a system of country slaughterhouses with refrigerated rail transport of the meat has been established to replace wasteful movement of live animals to distant cities. With their help the Marketing and Prices Section of the Chilean Government has acquired a prestige that is recognized throughout Latin America. FAO specialists are now helping to set up similar units in Argentina, Indonesia, the Sudan and Turkey. In several countries in the Near East and Latin America, FAO specialists have been able to influence the efficient organization of price stabilization and of storage and buffer stock systems which have been of substantial benefit to both farmers and consumers. Many governments in Africa are now being helped with such projects. Reports by FAO specialists are also frequently influential in the planning of aid and loans from development funds, banks and bilateral sources to improve marketing structure and facilities.

FIGURE 26. Participants in a training center for Central American and Caribbean countries visiting storage facilities at Comayagua, Honduras.

The organization of programs to facilitate the exchange of experience and information between countries with common problems is another important international service. Surveys and meetings on the marketing of fruit and vegetables and of livestock and meat in the Near East and Africa, for example, have had an impact which went far beyond the countries immediately concerned (Figure 26).

Forms of aid in which FAO activity has been limited are the establishment in the developing countries of marketing training facilities and demonstration projects. The Organization for Economic Co-operation and Development has been able to do much more of this in Europe; and the American Agency for International Development has undertaken similar work in other parts of the world. The need for systematic marketing training is only beginning to be taken seriously in the countries where it is most lacking. FAO hopes to make a start on this soon with the financial support of the United Nations Special Fund for Development. Requirements in terms of instructors, scholarships and training equipment are very great.

Practical demonstrations and pilot projects are valuable means of introducing new methods and equipment, trying them out and training staff in their operation. Frequently it is not known initially whether a given solution will be suited to the environment concerned. In some situations it would be difficult or impossible to apply an effective improvement program over the whole range of market transactions requiring attention, either for lack of essential trained personnel and capital, or because of resistance from established interests.

This is also true of schemes for substituting new types of market structures and pricing machinery for traditional small-scale trading operations. The successive production-assembly-distributive phases of a particular commodity can be reorganized simultaneously in a limited geographical area, which would be regarded as an experimental model for the rest of the country, as well as for other products. If the pilot project confirms the usefulness of the approach used, the range of coverage can then be extended.

It is to finance such practical marketing improvement projects that contributions to the Freedom from Hunger Campaign could usefully be applied. This would certainly be one of the most effective means of ensuring that more people get better food. Both producers and consumers will benefit and the world standard of living be raised.

S. p. A. Arti Grafiche Panetto & Petrelli, Spoleto-Roma

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